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RURAL ENGLAND

THE plea recently made by the President of the Royal Institute of British Architects for the preservation of the goodly heritage of beauty in domestic architecture, left us by our forefathers, is one which must appeal with especial force to architects, who realise —perhaps more fully than the general public—the unique quality of the buildings which adorn Rural England, and are also able fully to appreciate the irreparable loss which their destruction would cause to those old towns and villages where centuries of gradual development have left their mark in buildings of varied styles which, however, are linked in one continuous chain of essentially British character. No other land possesses in equal degree this heritage, and it must also be admitted that few have taken so little thought for its preservation.

But before we consider how this preservation may best be achieved, it may be opportune to endeavour to analyse the charm of these old villages and towns and discover the elements which constitute the essential beauty of the domestic architecture of our countryside, and why this is too often lacking in modern building, especially in the ever-growing suburbs of our towns.

The elements of beauty always found in our English architecture until recent times are simplicity, reserve, and a sense of fitness and proportion. The aim of our forefathers, in building a country house, a cottage, a farm, or a mill, as well as a great church or cathedral, was to construct a building which should be convenient for its purpose and pleasing to the eye; there was no desire to be original—that most prevalent and most insidious of all architectural disorders—or to impress neighbours with their wealth or social position, and it would have been considered in the worst possible taste to advertise any personal position or wealth in such a way. Each of the classes into which society was divided built in accordance with its needs and followed a definite tradition; the houses of the great nobles were not aped by their tenants, and parish churches did not look like cathedrals. Each shared the qualities of proportion, good craftsmanship, and the intelligent use of materials according to their nature and peculiarities. There was a strong and sound tradition in building and a characteristically English conservative dislike for innovation, which, for example, transformed the imported manner of the Renaissance into the distinctively English architecture of Queen Anne and the Georgian period.

Then ensued industrial development, when the old order disappeared; craftsmen became mere "hands" in a factory, the pursuit of wealth and the sordid ugliness of new industrial towns marched with devastating strides through rural England, and the modern "suburb" sprang into existence. Yet a little leaven remained, and—more fortunate than some other countries in this respect—the tradition of English domestic architecture was never wholly destroyed, and is to-day showing signs of more national growth in many of the housing schemes designed by capable architects.

The sense of beauty, if innate in all, requires cultivation, and can, of all faculties, be the most easily blunted and deformed by unbeautiful environment. In the present case we are faced by a double difficulty; owing to the redistribution of wealth consequent on the war, many persons who have lived in the unlovely surroundings of a typical suburb have now the means to build houses, business premises, or to acquire some old house and "improve" it out of recognition. We are, in fact, faced by a development very similar to that of the industrial era of the early part of the nineteenth century, with the added danger that we are now accustomed to ugliness, whereas our forefathers created it in the midst of beauty.

In the preceding period of destruction the "suburb" and the industrial town did not exist, and the ordinary man still lived in villages and towns where Georgian taste and tradition influenced design in all things, from buildings to teaspoons. When we pause to consider what this means we are inclined not to despair, but to thankfulness that things are not worse; that we have so far progressed in true education that a large and growing section of the public have a desire for something better than the "villa residence" of the past century, though, if the influence of habit and surroundings were alone considered, we might logically despair of any revival of a demand for good architecture. The demand for better housing has become insistent and general since the war. This suggests that the essential factor which must precede any improvement in the general "every-day" house building—the active discontent with the pre-war standard—is due (in part, at any rate) to one feature of the great upheaval. For the first time in our history many of the slum-dwellers were sent to strange lands, knew billets where, as in France, cleanliness and order provided a striking contrast with the conditions at home, so marked in fact that it could not fail to leave a permanent impression on the quick mind of the average townsman. Even in the case of those who remained in England (as munition workers or the like) new ideas of cleanliness, sanitation, and hygiene were absorbed, perhaps unconsciously.

In any case, the important fact (which renders opportune Mr. Dawber's plea for the preservation of the beauties and amenities of our countryside) is that there exists a general demand for better conditions, for well-designed houses, and a share in the amenities of life. The condition of public opinion that supports this demand as regards new building, the interest in such matters as Town and Regional planning, and the greater personal knowledge of the countryside which has come with the extended use of motor-cars, seems singularly propitious, and indicates that public support for a practical scheme for preserving the beauty of rural England could be enlisted if the proposal showed common sense and was free from any suspicion of self-interest. But the scheme must be one that will be effective without unduly interfering with the remaining liberties of the property owner, and should depend more on public opinion than on legislation or official regulations.

Hence we have considerable doubt that the suggestion of conferences and the implied suggestion of official action will either interest the public or prove an effective method of dealing with a problem which is one of some urgency. A better scheme, we suggest, would be to enlist the help of those who lead public opinion in our villages and smaller towns, where the danger is greatest, and irreparable damage may be caused by the erection of even one hideous or unsightly building in an unspoiled market square or near the village green, before the local residents have had time to combine in effective protest.

We suggest that in our villages and towns small voluntary committees or civic societies should be formed, and that the whole question of the preservation of the local amenities should be considered by such committees, so that the course of development could be controlled to the advantage of the community and the destruction of a building of artistic or historic interest by a single individual or firm without any consideration for the wishes or opinions of their fellow owners would no longer be an everyday occurrence. Such small groups or civic societies, composed of representatives of all sections of the community—local authorities, landowners and working men—could achieve much, if properly led, and it is here that architects (if they will support the cause championed by the President of the R.I.B.A.) could be of real assistance by actively promoting the formation of such advisory societies and by giving free advice and guidance to members on the various possibilities and problems with which a committee would have to deal.

The good results which have already marked the work of the Civic Society in Birmingham and one or two other cities encourage us to believe that if such voluntary organisations were established in every growing centre of population and linked into a definite organisation under the ægis of the Royal Institute of British Architects, or a special committee of the council of that body, the results would be most encouraging; besides going a long way to solve the problem of the preservation of existing buildings the scheme would also achieve that education of public taste which is so desirable and so preserve the spirit of Rural England.

NOTES

Architectural Competitions.

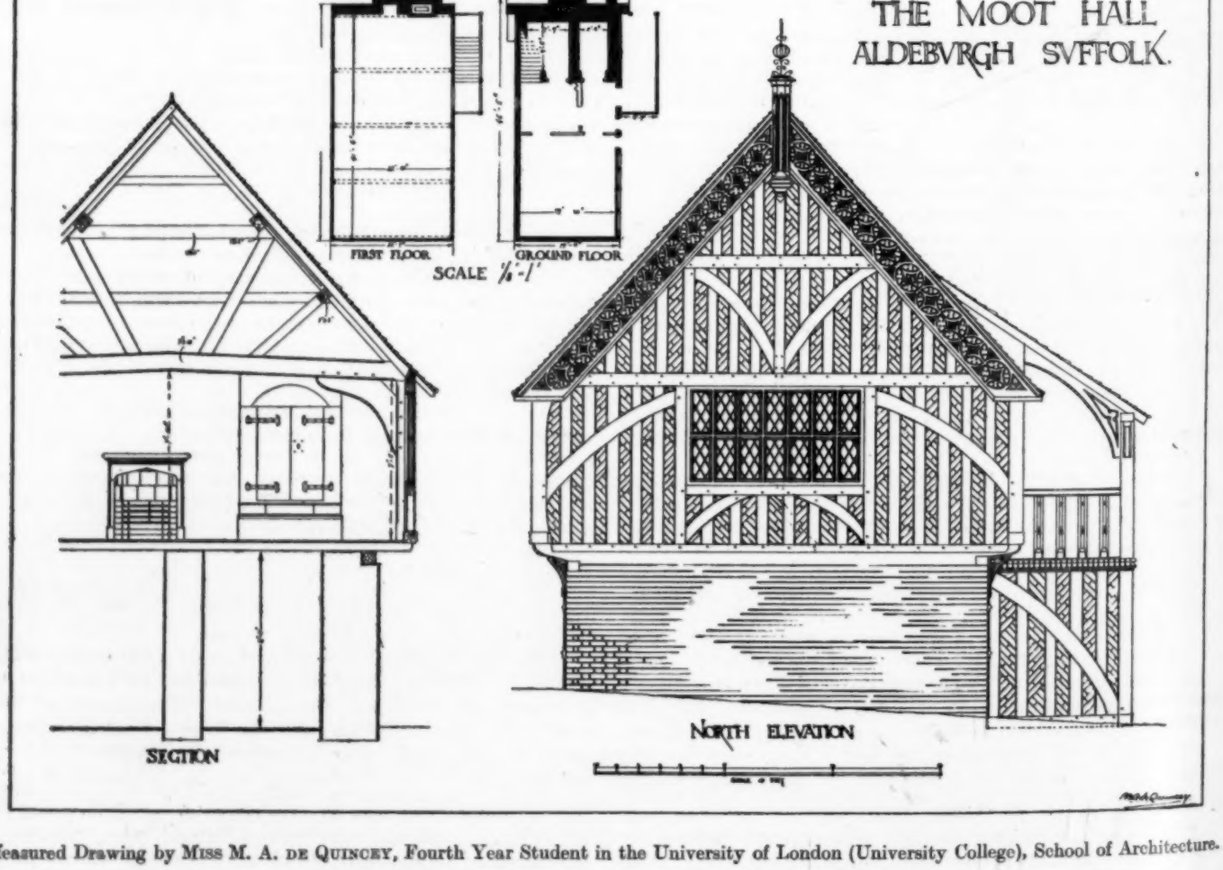
THE Council of the Royal Institute of British Architects has issued an important notice to architects who may act as assessors on the conduct of architectural competitions, embodying the resolutions carried at the last general meeting of the Institute, the essential part of which states that "inasmuch as assessors' awards will necessarily be final and binding on all parties, assessors must refrain from premiating any design—however high its architectural merit may be in their opinion—which contravenes any of the conditions and replies which they have themselves drawn up for observance by competitors, and thus avoid any ground for legitimate criticism of their awards after publication." The notice also refers to the value and importance of drafting conditions and replies to questions so as to leave the maximum latitude to competitors in the solution of the problem. If these points are observed by assessors there should be little room for complaints on the part of competitors of the kind we are all familiar with, though even now much will depend on the assessor.

Assessors' Awards.

A NOTICE has also been issued to architects who take part in architectural competitions reminding them that participation in a competition is a definite acceptance of the principle that the award of the assessor is final and binding upon themselves as well as upon the promoters, and that any competitor who feels that he has real ground for dissatisfaction with an assessor's award should communicate with the Secretary of the R.I.B.A., which, of course, is what he should do, and no doubt has done in the past. The notice further states: "That discussion or correspondence in the public or professional press which tends to criticism or disparagement of an assessor or award cannot alter the final and binding effect of that award, but may prejudice architects and the whole competition system in the opinion of the public, and is, therefore, highly undesirable." In spite of this, we think occasions may arise when competitors may not only feel justified in writing to the technical press when they have "real ground for dissatisfaction with an assessor's award," but that they will be performing a public service in doing so. The above notice may not be intended to eliminate a possible need of freedom, but that would be its effect if competitors interpreted it with literal strictness.

Architectural Criticism.

A CORRESPONDENT writes: "In looking through the varied and interesting contents of *Architecture* for February, which is well maintaining the character of a high-class monthly, I was astonished to see that it is the definite opinion of more than one writer in the correspondence on 'Adventures in Criticism' that free and frank criticism of modern buildings is unfair and dangerous—unfair to the designer, and unsafe for the critic. And I observe that the offence of the critic is infinitely worse if he is an architect in practice. I have often felt that many modern pictures (or so-called pictures) are an offence against the public, and instead of elevating, refining, and uplifting the public taste, go far towards lowering and degrading it. This seems a serious charge to bring against artists, and it is much worse than the offence which Ruskin lodged against Whistler. Yet Whistler was able to wear his farthing damages on his watch-chain to his dying day, though the accusation at the worst was one of impudence. But it seems that this matter of criticising architecture is to be looked upon as a much more dangerous matter, though the offence created by a bad building is far more grievous than the production of a bad picture. A vulgar, ugly building stands there for a lifetime or more, and it surely tells seriously against the amenity of its surroundings; it is a public injury. Against such offence as this, what remedy can we have? We can hardly wonder that the editor of the *Westbury* ***Herald*** writes: 'For the future we have decided that architecture must look after itself. It appears that the free discussion



Measured Drawing by MISS M. A. DE QUINCEY, Fourth Year Student in the University of London (University College), School of Architecture.

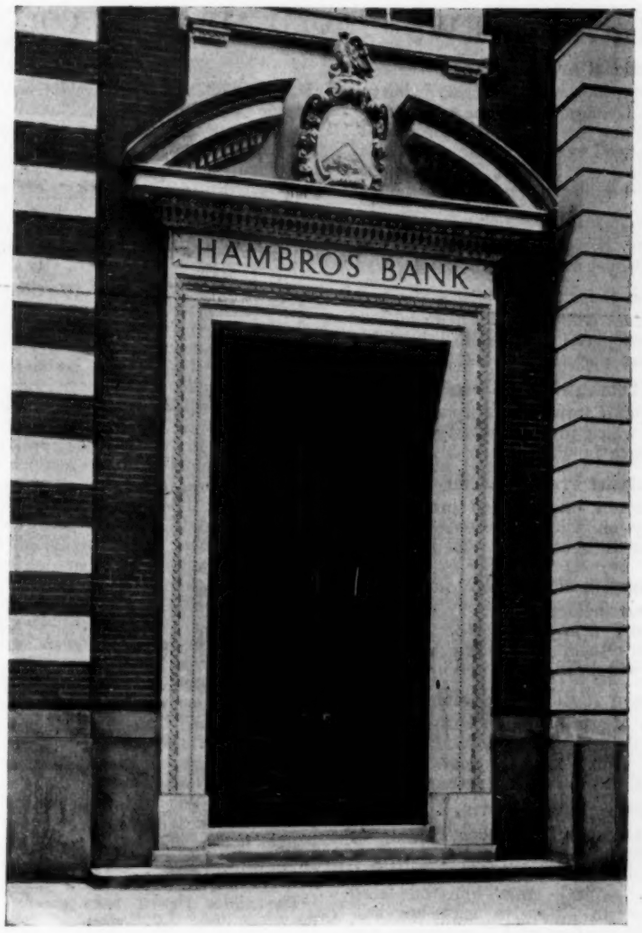
(Awarded Prize in "The Builder" Competition for Measured Drawings.)

of it involves us in any number of complications which apparently have a material bearing upon the nature of the criticism.'"

Fearless Criticism. OUR correspondent proceeds: "That one of the chances for the improvement of architecture lies in fearless criticism by those best able to judge, it now seems unlikely. Probably we all know architects whom we esteem as friends but not as artists, and it is not likely that we should put in print our views about their work. But what I cannot understand is why it should be wrong for an architect to criticise publicly the work of other architects, for, of all others, he is the best sort of critic, if he be an able artist. The two-fold aspect of an architect's work—its production of practical utility and convenience in a sound and stable building—has nothing to do with the artistry which can give value and interest to any structure, whether it be a factory, a hospital, a school, a church, or a house. I have inspected a great many buildings which left little to be desired from a practical point of view, but were dead and lifeless as to any artistic value. The reverse also often occurs, where excellent artistic results have been obtained at the sacrifice of economic values. In a publication the other day I read a most outspoken condemnation of a recent building which reflected very seriously on the architect, if the main function of his practice was to make building beautiful. If his clients cared little or nothing about beauty, they have no grievance against him, but the public have. We may incline to think that the public good rides supreme over that of the individual, but in this delicate matter of architectural criticism the public will evidently have to look elsewhere than to the architectural profession. The writer in the comic press is, however, scot free, and when one such said the other day he would hang all the architects who had spoilt Regent-street he hurled his deadly javelin without fear of the law of libel and knew that a great many of the public agreed with him!"

The Difficulties of Criticism. PROCEEDING, he says: "Seriously, however, I may be allowed to express my sympathy with the Editor of *The Builder* and all who desire the best development of art in building in that the difficulties of criticism are now more than ever to be added to the lack of active support for the production of fine building by the general public."

Co-operation in the Building Industry. THERE will be a good deal of agreement with the suggestions made by Mr. Herbert A. Welch in his paper on the conditions of the Building Industry, read before the Nottingham and Derby Architectural Society recently, a report of which we give on another page. It is, in the nature of things, quite right that the employers and operatives in an industry should be primarily concerned with the drawing-up of agreements as to wages and conditions; but we are not surprised that Mr. Welch should suggest that "the active interest in the industry should be placed upon wider foundations by the admission into its councils of representatives of a greater number of the parties interested, who would thereby become more closely associated with its welfare"; not, we take it, with any desire to interfere in matters of dispute, but in order to bring their knowledge and goodwill to bear on such discussions as arise.



Messrs. Hambros Bank, Bishopsgate, E.C.: Principal Entrance.
MESSRS. NIVEN & WIGGLESWORTH, FF.R.I.B.A., Architects.

Originality in Pottery. THE somewhat unpleasant word "novelty" seems to stand oftenest for what is most undesirable. In the case of pottery, for instance, we see, in spite of some improvements by individual craftsmen, how failure is due to defective form, and decoration applied to faulty form can never be satisfactory. Nor is it sufficiently realised by the craftsman how much study of ancient forms is necessary in order to refine his own design, through which a salutary influence is brought to his productions. A good designer of pottery will not copy the ancient shapes, but their influence will promote and help to endow his own original work, for the range of form can never be exhausted. And so with the decoration to be applied. Though De Morgan was far from being a first-rate designer, we see how much of the value of his work depends on the familiarity he had with fine periods of ornament. The defect in these democratic days lies in want of culture—lack of scholarship to keep the work sustained at the best level. This will not be to hold it enslaved to derived sources for its expression, but to lift our conceptions which then, informed by the best, reach their own originality in a better way.

The late Mr. Derwent Wood. THE world of art is the poorer for the loss of Mr. Derwent Wood, R.A. In the early years of this artist's work we were attracted by the refinement and grace with which he invested his subjects, and his fine record of work may be said to have culminated in the last two or three years' works and exhibits at the R.A. Amongst our many war memorials, we may surely credit amongst the best that of the Machine Gun Corps, at Hyde Park-corner. Besides his distinguished work as an artist, he rendered invaluable work in the war as, in the words of *The Daily Telegraph* "a large number of ex-soldiers owed their comparative freedom from facial disfigurement" by the valuable work of Derwent Wood in he preparation of masks, &c.

GENERAL NEWS

Professional Announcement.

Mr. George Drysdale announces that, owing to the death of Mr. Leonard Stokes, the partnership between himself and Mr. Stokes is dissolved and that he has arranged to carry on the practice at 17, Buckingham-street, Adelphi, W.C.2, under the title Leonard Stokes & Drysdale.

New Royal Academician.

Mr. Walter W. Russell, A.R.A., painter, has been elected a Royal Academician.

Institution of Structural Engineers.

The Institution of Structural Engineers has had a second telephone line installed, and the numbers now are Victoria 3131 and 3132.

South London's Church Needs.

The Bishop of Southwark is appealing for £200,000 with which to build twenty-five new churches in South London.

Westminster Proposed Library.

The Westminster City Council proposes to erect a library on the Orange-street site to designs prepared by Mr. A. N. Prentice, F.R.I.B.A.

Drayton Manor Sold.

The ancestral home of the Peel family, Drayton Manor, near Tamworth, built by Smirke for Sir Robert Peel, has been sold privately, and will shortly be offered by auction.

Roman Remains at Chester.

The remains of a first-century barracks have been discovered in the Deanery field, Chester, and a marble figure of the goddess Fortuna during excavations in Frodsham-street.

Discoveries in Yucatan.

Archæological discoveries of Maya ruins made in Yucatan, Mexico, states the *Morning Post*, include a monolith bearing a date corresponding to A.D. 333, several large limestone-faced pyramids, and an extensive enclosure surrounded by a 12 ft. stone wall 1½ miles long and from 12 ft. to 15 ft. thick.

Housing and Town-Planning Tour.

The Spring Tour of the Garden Cities and Town-Planning Association this year will be to the West of England. The cities to be visited are Oxford, Bath, Bristol, Cardiff, and South Wales. Forms of application may be obtained from the Secretary, Garden Cities and Town Planning Association, 3, Gray's Inn-place, London, W.C.1.

Cements Ancient and Modern.

THE eighth meeting of the Associate Section of the Edinburgh Architectural Association was held in their Rooms, 15, Rutland-square, Edinburgh, last Monday, Mr. J. C. Cunningham in the chair, when Mr. A. M. Murray lecturing on "Cements Ancient and Modern," sketched the history of the early efforts to manufacture cements from Roman times to the present day, and showed how we were indebted to Smeaton, the builder of lighthouses, to Aspdin, and their contemporaries. The methods used by these men in the early part of last century, he said, were similar to a great extent, though crude, to the modern highly efficient processes. The lecturer described how cement is manufactured in a modern plant, and how it is tested by chemists at various stages of its manufacture to ensure that the quality is at a high and constant standard. After a brief description of some of the lesser-known cements, mostly Continental brands, and some remarks regarding the uses of cement and the causes of failure in concrete work a film was exhibited entitled "The Concrete Age from Roman Times Onwards," showing examples of the use of concrete in Roman times, including the Colosseum, Rome, and many concrete structures of recent years, such as Wembley Stadium, Brooklands Racing Track, and other directions. It was shown that concrete was a versatile material which modern ingenuity had applied to many and widely varied uses, such as sewer pipes of large dimensions, telegraph and fencing posts, statuary, buildings of all descriptions, and roads.

OLD AMERICAN COLONIAL HOMES

MR. LIONEL PEARSON addressed a large audience on Monday on "Old American Colonial Homes," at King's College for Women, Camden Hill-road. He opened a delightful lecture with a brief outline of the origin and characteristics of the American Colonial home Its three different settings were: Virginia, where the planters lived in a kind of "grand manner," based on English customs; New York and New Jersey, where the architecture was traditionally influenced by Dutch settlers; and New England, where the rich merchants had settled near the sea-ports, and built houses with plain exteriors but comfortable interiors, filled with good furniture. He mentioned also the few examples of the seventeenth century farm house, following English lines, with the living-room open to staircase and entrance, and remarkable for capacious cupboards. The American Colonial home, the lecturer suggested, was even more interesting than the English Georgian, for it showed where the Americans had developed the English traditional art on their own lines, and contributed their own touch of originality. The characteristic boarded walls and shingled roof arose from the abundance of timber, and so strong was the prejudice against brick and stone in the early days that brick houses were even pulled down sometimes as being considered less healthy than those of timber. The sash window was used throughout. "The great American brain," said Mr. Pearson, "has not evolved anything to beat it." But the great national invention was the porch, whether of two stories in the millionaire's Long Island home, or the little wooden one where "Mrs. Wiggs" sat on her rocking chair. The American tendency was to "move on." Timber houses suited that character, and were even capable of being literally moved on rollers.

The slides shown were chiefly from Mr. Pearson's own photographs, taken in the intervals of studying American hospital architecture. The Virginian type of house showed pavilion blocks on either side of the main block, one for kitchen purposes, and the other for slave quarters. At Washington's house, Mount Vernon, the subsidiary blocks were linked to the main block by wood colonnades. The house was built of timber to resemble stone. Where brick was used it was sometimes believed to have been brought as ballast from England, and some undoubtedly came from Holland; but the lecturer considered that in Virginia and Maryland most of the bricks were made locally. One example of the rare "Dutch Colonial" type was shown, having a stone substructure. The beautiful "super-bungalow" at Baltimore, and some fine town houses were instances of originality of plan, and the views at Concord the centre of literary life, gave a charming impression of simplicity enhanced by the presence of trees. The houses depicted were seldom designed by architects, but by amateurs, such as Washington and Jefferson, or a carver like MacIntire, of Salem, who designed for the New England merchants. There was also Charles Bullfinch, of Massachusetts, "a sort of Adam," of that time and place. At Washington the Octagon House (now the home of the American Institute of Architects), was designed by Dr. Thornton.

Some special features were pointed out in interiors now reconstructed at the Metropolitan Museum, New York. There were the slender fluted columns to fireplace and recesses, the boarded walls of the farmhouse interior, and the curved end to the well of a staircase by MacIntire, besides the rich work in such rooms as Mr. Powell's, at Philadelphia, of 1768. A view of the church at Providence, Rhode Island, showed the spire built in 1775, copying in timber, in a peculiar telescopic construction, a design from Gibbs' book, for an alternative to his existing spire at St. Martin's in the Fields. The lecture closed with a few examples of modern American buildings, Mr. Pearson remarking that possibly the skyscraper "will soon be considered an interesting survival."

COMPETITION NEWS

Scottish Legal Life Assurance Society: New and Enlarged Premises.

The President of the R.I.B.A. has nominated Mr. John Keppie, A.R.S.A., F.R.I.B.A., as assessor in this competition.

Sea Beach Buildings, Aberdeen.

Aberdeen Town Council invite competitive designs for the following buildings to be erected on the sea beach:—(*a*) Dance hall for 500 persons; (*b*) Restaurant for 250 persons; (*c*) Variety Entertainment Pavilion, to seat 750 persons; (*d*) Shops. The President of the Incorporation of Architects in Scotland is the assessor. Designs to be sent to the Town Clerk by June 14. Conditions, &c., may be obtained on application to Mr. A. B. Gardner, Director of Housing, and Superintendent of Town's Properties, Town House, Aberdeen.

Cemetery Lay-out, Leicester.

Mr. H. V. Lanchester, F.R.I.B.A., has been appointed assessor in a competition for designs for the lay-out of the new cemetery at Leicester. Premiums of £100, £50, and £25 are offered.

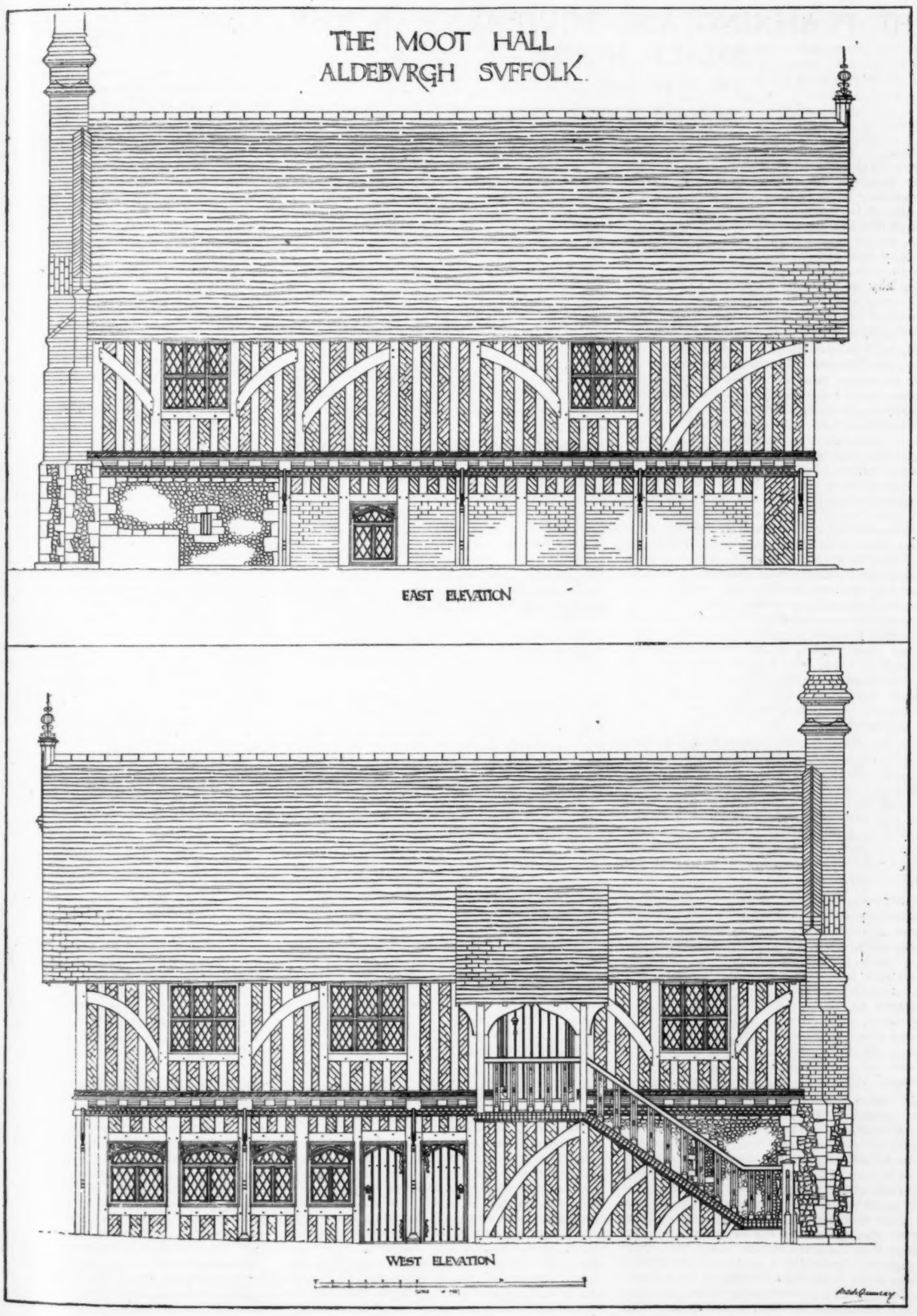
Liverpool Cenotaph.

A competition is shortly to be instituted for a cenotaph to be erected on the plateau facing St. George's Hall. The site is now occupied by a pedestal bearing the statue of Beaconsfield midway between the statues of Queen Victoria and Prince Albert. The Beaconsfield statue will be removed to the rear of the Cenotaph, and placed at the bottom of the first flight of steps fronting the Hall.

Competitions Open.

New Offices for West Bromwich Permanent Benefit Building Society. Limited to architects within a radius of fifteen miles of Birmingham. Premiums: £100, £75, and £50. Mr. W. Alexander Harvey, F.R.I.B.A., assessor. Apply to Mr. John Garbett, Secretary, 301, High-street, West Bromwich	Particulars published in "Builder."	Sending-in date.
Public Hall, Topsham. Premiums £50, £40, and £30 respectively. Mr. Walter Cave, F.R.I.B.A., assessor. Last day for questions, Jan. 1, 1926. Designs to be sent in by April 1, 1926. Conditions from the Clerk to the Parish Council, Topsham, on deposit of £1 1s.	Jan. 1	April
New Public Offices, Chingford. Apply Mr. Leonard C. Bowen, Clerk to Council. Deposit £1 1s. Premiums: £40, £30, and £20	Feb. 19	April
Isolation Hospital for Infectious Diseases, Doncaster. Mr. T. R. Milburn, F.R.I.B.A., assessor. Premiums: £200, £100, and £75. Apply, Mr. W. Bagshaw, Town Clerk, Doncaster, to whom all questions must be addressed by March 8. £1 1s. deposit required	Jan. 29	May 10
Australian National War Memorial. Villers Bretonneux, France. Limited to Australians under special conditions. Apply Military Headquarters in capital city of each State, or High Commissioner's Office, Australia House, Strand, London. £2 2s. deposit required	Dec. 25	May 31
Royal Society of Arts Competitions for Industrial Designs. Apply Secretary, Royal Society of Arts	Jan. 1	June
Incorporated Architects in Scotland: (1) Rowand Anderson Medal and £100: City Art Gallery and Museum; (2) Rutland Prize (£50) for Study of Materials and Construction; (3) Prize (£10 to £15) for 3rd year Students in Scotland; (4) Maintenance Scholarship, £50 per annum for 3 years. Apply Secretary of the Incorporation, 15, Rutland square, Edinburgh	Nov. 6	..
Secondary School for Girls, Worcester. Premiums 100 guineas and 50 guineas. Mr. Herbert T. Buckland, assessor	Dec. 11	.. —
Pair of Working-class (Subsidy) Houses in brick, non-parlour type, with three bedrooms, for Diss U.D.C. Designs and prices invited. Apply Mr. G. E. K. Burne, Clerk.....	Feb. 19	.. —

* Competitions when "warned" or vetoed by the R.I.B.A. are starred.



The Moot Hall, Aldeburgh, Suffolk.

Measured Drawing by MISS M. A. DE QUINCEY, Fourth-Year Student in the University of London (University College), School of Architecture.

(Awarded Prize in "The Builder" Competition for Measured Drawings.)

THE PLANNING AND EQUIPMENT OF THE SMALL HOUSE.—V

By EDWIN GUNN, A.R.I.B.A.

A ROOM AND ITS PARTS.—(*Continued.*)

Windows.

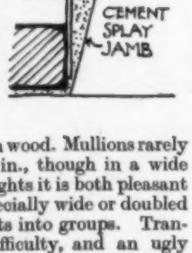
THE vital question of sash *v.* casement will have been decided among the earliest points preparatory to the commencement of a design, for though it is neither impossible to introduce a block of sash windows together with casements in a design (well-known houses by Professor Lethaby and Mr. H. M. Fletcher exemplify), nor to embody a few minor casements in an essentially sash-window house, yet in the main the sash and its forerunner, the two-light transomed casement, belong to the architecture of formality and the casement to that of freedom.

The sash window presents special difficulties in the small house. It is vital to a sense of scale that a common measure should be applicable; windows must line at head and sill throughout a story (or any variations must be on a symmetrical basis) and the standard pane must be closely followed. In houses such as we are considering this will mean either that to secure enough latitude to permit adjustment to actual lighting needs of varying rooms the standard is reduced to a point where the work looks petty or "doll's-housy," or that some rooms will end by being under (or unpleasantly) lighted. The reason for this is quickly made apparent. To allow for the width of boxed frames, the basic window three panes wide is necessarily made at least 3 ft. 6 in. wide. One such window is a meagre allowance for a room, say, 12 ft. by 15 ft.; three would leave insufficient intervening wall, while two produce a central pier instead of a central light, which is apt to be irritating internally. Designers of great skill and judgment can usually accomplish the exceptional, and achieve their good results often in defiance of the "safe" rules; but these notes are aimed at the average man.

Two departures from the normal in sash-window design are less extensively used than might be—the sash with side-lights, useful to overcome the difficulty outlined above, and the long window, in which the lower sash is prolonged to the floor-line, this latter being of use in place of French windows or garden doors, the bottom sash being made to push up for head-room clear of the meeting rail by means of a pocket above the window-head.

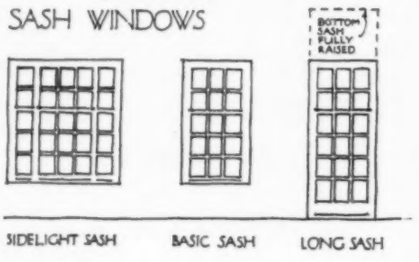
Casements may be employed with equal formality to sashes, but even then with a greater degree of freedom since a wide, low sash fails to work easily, while a casement may be of any desired proportion.

Casements in common use may be roughly classified as (1) wood casements, (2) wood frames with metal casements, (3) metal casements of "standard cottage" type.



In wood casements the mistake of too much substance is frequently made—a window wants to be more glass than wood. Mullions rarely need be over 4 in. by 2½ in., though in a wide casement of five or more lights it is both pleasant and sound to introduce specially wide or doubled mullions dividing the lights into groups. Transomes also present a difficulty, and an ugly obstruction in a small casement, and the "sham transome" formed by a deep sash-bar divided where a top hung light is desired are a useful expedient. It is a commonplace that transomes should avoid the eye-line, but they are often pushed up unnecessarily on this account, eye-height, *when seated*, being of chief importance. The height of the glass-line at sill level (both for sashes and casements) is also a matter of paramount importance internally, and this, too, should be settled in relation to a person seated in a low chair—about 2 ft. 3 in. is reasonable—since nothing can be more vexatious than to be restricted to a view of sky and tree-tops when in repose.

Metal casements in wood frames call for rather more substance in the woodwork if the eye is to be satisfied; 4 in. by 3 in. mullions (the larger dimension being the face size) are about right. When lead glazing is used it is advisable to see that the horizontal leads line up across the several lights, as the appearance internally is otherwise irritating. Skinny cames should be avoided—they have invariably a mean effect—¼ in. is a minimum. Panes either too large or too small have equally disturbing effect on general scale—about 8 in. by 6 in. is a safe medium for rectangular panes in lead glazing, and if diamond quarries are introduced (and there are positions, such as lavatories, stairs, larders, &c., where they may without affectation



be employed), their size should not exceed a double equilateral triangle of 4½ in. side.

"Standard" metal casements are a legacy of the war, and in the circumstances in which they came into being we may be heartily thankful for them. Many a mean amateur or speculative house is saved from the extreme of offence by their regulating scale. The question of proportion of glazing panes has been deferred to this point. It is a safe rule to base this on the single casement 1 ft. 8 in. wide, two panes across, and with the vertical height of each pane proportioned to width as the diagonal to its square. This method of proportion is equally applicable to sashes, which, however, will stand rather bolder dimensions, as will French casements.

In using metal casements set straight into brick reveals it is desirable to use the wide variety of frame, and to plaster the internal jambs to a slight splay (in cement for the undercoat), as the absence of substance in the frame otherwise gives no curtain-room and produces rather a mean effect internally, which even a slight splay much improves; while practically the cement jambs are a protection against penetration of wet and risk of damage.

Fireplaces.

Some remarks on these were made incidentally in Article V, when discussing wall treatment, and still earlier in regard to their position relatively to doors. It is perhaps only necessary to say further that not every fireplace requires emphasising—bedroom gas fires, for instance, may often best be treated unobtrusively and the usual appurtenances of chimney shelf, kerb, &c., wholly omitted. Where a fire occurs in a recess (purposely avoiding the word ingle-nook!) the chimney-shelf prolonged across the full width of the recess with shelves for small books on either side of the chimney projection, provide at one time convenience, a furnished look, and an aid to proportion. This can be as inexpensively and simply done as possible—the books do all that is needed in the way of enrichment.

HAMBROS BANK, BISHOPSGATE

THE recent discussion on the possibility of creating more interest in our street architecture does not appear to have carried us very far, but we know there are enlightened building owners who are sufficiently well informed to be anxious to secure not only conveniently-planned premises but buildings which fulfil the æsthetic requirements, and possess dignity and charm. That they are comparatively few must be admitted when we consider the many opportunities which owners have had since the war of showing an enlightened interest in the buildings which are erected for them, but we must be thankful that there are not only clients who ask for the best architectural expression to be given to their work, but that we have architects who are able to respond to the call. One fine building in a dull street will do much to relieve monotony and impart interest, while in association with buildings in a street already possessing good work it will have added distinction, and in any case such a building will always excite interest and receive full measure of praise from the discriminating public. A recent notable work of considerable interest and character is the new bank in Bishopsgate for Messrs. Hambros.

The new building contains what is undoubtedly one of the finest banking halls in London. The exterior of the building impresses one by its simple breadth of treatment, which produces an impression of size and dignity too seldom obtained in our modern structures. The walling generally is of brick, but stone is used for the ground story of the bank and for the great pilasters which emphasise the slightly projecting portion of the front and give telling effect of soaring, vertical lines. Carving is nearly confined to the capitals of the pilasters and keystones to the ground-floor openings. It is obvious that great reticence has been observed in the application of ornamental details, and the whole effect of the frontage shows a dignity and reserve which is very welcome. Special interest will be felt in the fine banking hall on the ground floor, which is approached through a marble-lined vestibule. The walls are covered with mahogany panelling up to the deeply coffered plaster ceiling, the panels being of great size and of very finely figured wood. The hall is about 80 ft. by 40 ft., with a height of 18 ft. to the ceiling, though it looks more. It is divided into five bays, and along the street side are circular wood columns carrying the inner part of the wall, the recesses between the columns being furnished with tables with open carved fronts and pierced tops for the radiators within. The effect of the marble vestibule is enhanced by the treatment of the staircase, over the first landing of which is a painted window under the soffit of the enclosing arch: this window is an admirable design both in drawing and colour and comes with excellent effect at the first stage of the staircase. On the first floor is a fine suite of apartments for the Bank directors and secretary.

In Hambros Bank, which we illustrate in this issue, the most modern methods of construction and equipment have not been sacrificed in any way to æsthetic requirements. The steelwork has been designed on a system of unified bays which has been adhered to throughout all the floors of the building, the floors themselves and the internal walls being of light construction.

The building has a heating and ventilating system operated by vacuum steam generated by oil-burning boilers, functioning at a low pressure, the air, which is warmed in cold weather, being drawn right through the building by a large extractor fan situated on the roof.

The bank is fitted throughout with synchronised clocks and intercommunication telephones, and electrically-operated lifts connect the various floors. Mr. B. L. Hurst was the consulting engineer for the constructional work. Messrs. Niven & Wigglesworth, FF.R.I.B.A., were the architects.

CAMBRIDGE.

AT a meeting of the Architectural Association, held at 35, Bedford-square on Monday evening, Mr. H. M. Fletcher read a paper on "The Buildings of Cambridge," illustrated with a number of lantern slides made from photographs by Mr. F. R. Yerbury, the Secretary of the Association. The chair was occupied by Mr. J. Alan Slater (Vice-President).

In the course of his address, the lecturer said the buildings of Cambridge became more intelligible if the relation of colleges to university was clearly grasped. The university as a body did not concern itself with the food and lodging of its students, beyond the exercise of a superintending power over the regulation of the houses in which they were lodged in order to protect them from extortions; it also assumed the care of the public morals of the students. The sense of independence in the various colleges was very strong, and their relation to each other and to the university had been aptly compared with that of the States of the American Union to each other and to the Federal Government.

The apparatus of buildings necessary was very small—a hall of assembly, schools or lecture rooms, and a library. Consequently, until recent times the only external evidence of the university's existence was the small group of buildings at the north end of King's Parade forming the Schools Quadrangle, which contained the library and the Senate House. To those buildings might be added the University Press, which after 1654 occupied what was now the site of the Masters' Lodge of St. Catherine's College. In the early nineteenth century the Fitzwilliam Museum was added, and later, owing largely to the development of scientific education, many museums, laboratories and other buildings were added, principally in two groups in Free School-lane and the park of Downing College.

The monastic system had made the notion of communities of men living apart for some special purpose a familiar one to the Middle Ages, and it was natural that benefactions should take shape in such foundations. No less naturally, in the course of time the benefits of college life were extended to students who were able to pay. Even before the establishment of colleges there existed hostels, formed probably by the students themselves, and consisting merely of lodgings or chambers. The colleges, however, offered far more than this. Each was governed by its own statutes, which made it self-contained and self-regulated, a condition which held good to the present day.

The earliest colleges, such as Clare, Peterhouse, and others, had no chapels, but used their parish churches for worship. But a chapel was contemplated in the foundation of Pembroke College in 1346, and permission was granted by Urban V in a Papal Bull dated 1366. Thereafter the chapel became part of the usual equipment of a college, although Peterhouse used the adjoining church of St. Mary the Less for 350 years until the existing chapel was built in 1632.

Besides the chapel and chambers for students, the buildings of a college consisted of a dining hall and kitchen, a library, and a Master's lodge. These were architecturally grouped around a court or courts, and there was commonly a gate tower to mark the entrance. As college after college was founded they were led by rivalry to vie with one another in noble building, with what success all the world knew. As a consequence of that evolution, the colleges in Cambridge bulked much larger in the visitor's eye than the University.

A college was a domestic building, and in the early days the planning of a college was on the same lines as that of a large country house. As time went on the arrangements were modified, and there came such arrangements as those of Peterhouse, where the first court was entered through an arcade on each side of the chapel; or Caius, whose founder showed a fore-knowledge of modern ideas by insisting that the south side of the court should be unbuilt on for the admission of sunlight and air.

The proper design of the ranges of chambers was vital in the arrangement of a college. Historically and socially, that was the essential element, for without it there would be no college at all, but they were nowadays apt to fix their attention on the more imposing parts of the group and take the rest for granted. The height was all-important. The ideal was to have two stories in the wall and an attic with dormers in the roof. Such a low-proportioned building actually gave greater spaciousness to the courts which it enclosed, partly from the cheering effect of sky and sun, partly by enhancing the height and stateliness of hall, chapel and gate-towers. If one imagined the great court of Trinity hemmed in by a third full story, one would see how its apparent size would be diminished. The next best arrangement was two stories in the wall and a third in the roof with dormers or gablets. That arrangement was seen in the second court of St. John's, which for all its charm of sober orderliness was just a trifle oppressive because of the relation between the wall and floor. The third possibility—a wall three full stories high, with or without dormers—was always in his opinion unsuccessful. It was uncommon among the older courts, but could be seen in the new courts of Trinity and Corpus. Higher than that he did not think anyone had ventured at Cambridge, but a comparison of the four-story courts and squares of the Temple and Gray's Inn would prove the wisdom of the lower proposition.

The grouping of the students' chambers had been little changed through the centuries. There were no corridors, but staircases open to the air at the foot. On each landing were two sets of rooms. It was a simple plan, and had some inconveniences, but the corridor plan had more. Corridors produced the illusion, possibly the reality, of hotel or institution life, as those who had visited Girton would appreciate, and destroyed the sense of privacy and independence in the midst of a closely-knit society which was of the essence of collegiate life. Corridors certainly gave shelter from the weather, but the amount of time spent in visiting did not amount to much. After some experiments in the corridor plan, he believed that most colleges were returning to the older system as better suited to the needs of Cambridge, and it was pleasant to see it adopted in the new buildings of Clare, where by ingenious planning Sir Giles Scott had made each staircase serve a considerably larger number of rooms.

If he were asked for an indication of the spirit in which the designer of a college should set about his work, he would answer in these words: "I will that the edification of my same college proceed in large form, clean and substantial, setting apart superfluity of too great curious works of entail and busy moulding"—that sentence was from the instructions of Henry VI for the building of King's College, and was probably written by the King himself. The document was dated 1448, nearly 480 years ago—had the advice been bettered since? Would that some of the architects of the past hundred years had laid it to heart when they came to build in Cambridge.

The inspiration of Cambridge architecture was domestic. The scale was generally modest, yet with no lack of dignity, but it was private dignity rather than public ostentation. The whole history of English architecture was there, from the Saxon tower of St. Benet's Church to the twentieth-century scholarship of Clare's new building. In the earlier work, in the use of brick and tile and the four-turreted towers, the local influence of East Anglia could be traced. There had always been a reverence for antiquity and a perseverance of old tradition. The fan-vaulting of the entrance-gate of Clare, dated 1638, was believed to be the very latest in the country except that of the great staircase of Christ Church, Oxford, built in 1640. The feeling for scholarship had led, until comparatively modern times, to a reserve in ornament combined with a love for fine workmanship. There was hardly a town in England where the higher building crafts were so well represented. Masonry, brickwork, plaster, wood panelling, and ironwork were seen at the highest pitch of craftsmanship, and of ironwork specially there was such a wealth that one need hardly go outside Cambridge to see what the best English smiths could do.

It was noticeable all through how strongly English was the flavour of the work, and it surely behoved anyone building at Cambridge to preserve that flavour. That need not imply any sacrifice of modernity, but, to take a concrete example, he thought the soundest criticism of Waterhouse's work at Caius was that it was definitely foreign, and therefore out of tune with the local orchestra.

The inspiration of Cambridge was domestic, and the scale modest. The inference was that one need not go there in search for the sublime, although there was one great exception in King's College Chapel. Such a well-known building needed no description, but if, as he believed, it was a criterion of a great interior that it should make a human being feel like a worm, that chapel was sublime. The dimensions were heroic for an English building. It measured 288 ft. by 40 ft. by 80 ft. high. It was worthy of note that the length was within a few feet of Albi Cathedral. The design of the roof was marvellously scientific, and the system of interlocking the stones of the great transverse ribs was a wonder of skilful masonry, but used with such subtle art that it served rather than dominated the design. Nothing that the mason, the carver, the plumber, the woodworker and the glazier could do towards the perfection of the whole had been left undone.

An amusing instance of the spirit of rivalry and independence of the colleges was related by the lecturer. This was the Butt Close controversy, which arose between King's College and Clare College in 1637 over a small piece of ground on the farther side of the river. The controversy was conducted with amazing liveliness and virulence, and King Charles I was brought into it, not to mention such smaller fry as the Chancellor of the University, the Archbishop of Canterbury, and the Bishops of Norwich and Winchester. It was finally settled by a formal award of the King, as a result of which the south-east angle of Clare College is made to stand completely on the lawn of King's College.

In the course of a brief discussion the Librarian of Magdalen College mentioned that the mirrors between the bookcases in the Pepys' Library had existed in the same position when the library was at Pepys' house in the Adelphi, and it was probable that it was with these mirrors in mind that Evelyn was led to compare the house with Versailles, as disclosed in the recent series of articles in *The Times*.

A hearty vote of thanks to the lecturer concluded the proceedings.

CORRESPONDENCE

[While we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

Fancy Dress.

SIR,—Each age as it comes is naturally chiefly concerned with its own affairs, but the present seems to be particularly introspective. In architectural affairs this characteristic seems to be particularly evident, and it is only to be expected that an art so deeply involved in the affairs of every-day life should be one of the chief indices of the feeling of the age. The architect of to-day is particularly concerned with the manner in which he should express the new methods of construction which have been placed in his hands by a prolific science, and any treatise or writing upon this contentious subject is read and studied with close interest by those who have the question at heart.

One is, therefore, forced to acknowledge a reaction of disappointment following the sense of pleasant anticipation with which one took up the press report of the paper read by Mr. Leverton before a recent meeting of the Institution of Structural Engineers. It seemed that the choice of such a subject as "The Architectural Treatment of Reinforced Concrete" was bound to throw a new light upon this difficult problem of the utmost importance to us all. Here, surely, was an opportunity for science and art to find a common standpoint, and an occasion when the two might be shown definitely to converge upon the same objective of perfect building. Alas! to the architect at least, the views set forth appeared to be entirely reactionary, and particularly dangerous when it is remembered that the paper was read in the hearing of the very men whose co-operation we are most anxious to secure, and whom we particularly wish to convince of the need of our co-operation.

To take one of the early points of the paper as reported, the author rightly drew attention to the fact that the relative strength of reinforced concrete renders possible a very much lighter construction than is imposed by our brick and stone tradition. However, instead of insisting that this very characteristic must impose the first principle of the architectural expression of this new material, he goes on to suggest that, lest our conservative susceptibilities be shocked by a new and strange expression, a false hollow construction should be adopted to deceive the eye into a belief that the whole economy of the material was being squandered into a massive semblance of ancient tradition. This false dressing up of architecture is the very thing for which architects are educated to avoid. Far better let the architect leave buildings alone for the structural engineer to present in an un-lettered honesty.

Happily, if we look around with seeing eyes, it is evident that the architect of to-day is to a very large extent assimilating the nature of the new methods of construction now in use, and in expression the finer modern buildings exhibit characteristics as fresh and true to themselves as the steel and concrete frames which hold them together. No longer does the heavy rusticated basement story, so reasonable as the foundation of a stone design, find frequent repetition; nor does an excess of solids, necessary for the safety of a building under the old *regime*, supplant those useful voids for which the commercial occupier cried in vain in a past generation. These things, whether deliberate or imposed, stamp a design with its period, and the same thing has been going on all down the ages as nature has demanded, and resulting in unaffected and unselfconscious architecture.

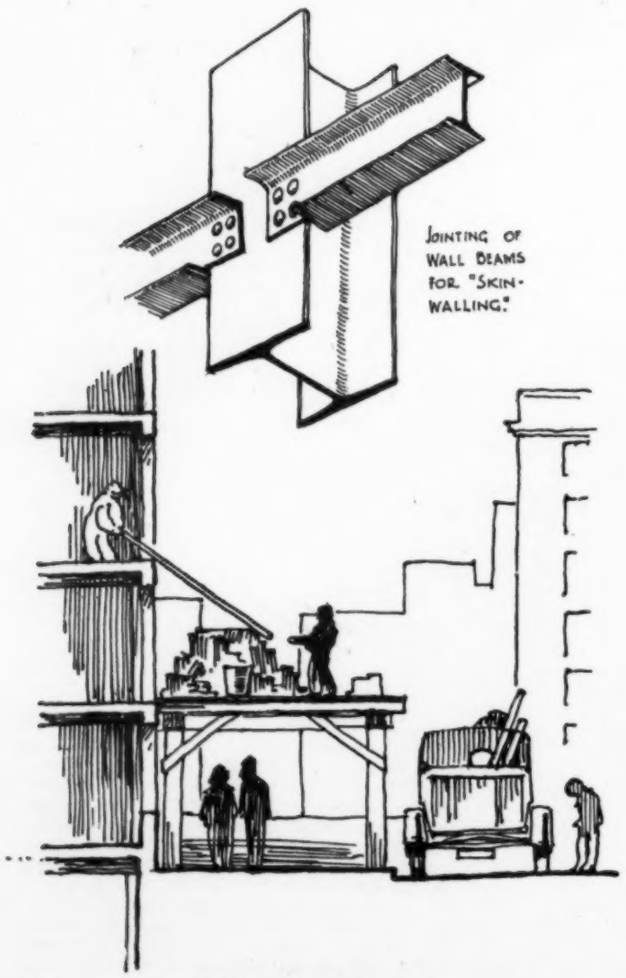
To pass on to yet another point made in this paper, and with which issue must be at once joined, the author suggests that the architectural treatment of this form of construction might be inspired by the architecture of the early Renaissance in England and Italy, because these periods were marked by light treatment of design. This surely is another heresy of the worst colour. The inspiration of every work of architecture must lie in the scheme and construction, if it is to prove itself at all worthy of the name of architecture. Say, if you like, that because the architecture of the early Renaissance was light in treatment (assuming that this statement can be accepted as correct—one recalls the Ricardi palace and even Whitehall!), and because of our deeply-rooted classic tradition, the treatment of light modern construction may show kinship to these past styles; but do let us make it clear that such is the nature of things, and not manufactured on the drawing-board.

Let us impress upon our friends the structural engineers that what we want of them is their goodwill in explaining to us the nature of the constructional methods in which they excel, and that it will be by the measure of our understanding that we shall find a language of expression. Let us once for all scotch the idea that it is for them to produce the body and for us to bring forth the fancy dress with which to disguise it. The structure must predominate, and the expression will follow.

The Americans have given us an object lesson in this matter. For a time it was their practice to exercise a very fluent ingenuity in subdividing the skyscraper into the parts of an Italian *palazzo*. Only the marvellous scale of achievement saved such compositions from the scourge of plagiarism, and withal, the freer compositions of more immediate modernity are in refreshing contrast. The more timid scale of our street architecture gives less scope for the inevitable stamp of true period to assert itself, so that it is doubly important for us to watch our step.

It is to be hoped most sincerely that the public utterances of men whose positions demands the respect of the public when matters architectural are in question may be more carefully weighed, and with a fuller sense of responsibility.

C. MAXWELL AYLWIN.



Bridge over Sidewalk.

(See "Notes on America," page 355.)

EXHIBITION NOTES

THE GOUPIL GALLERIES.

A realisation of the qualities which characterised the art of the late Robert Bevan is strikingly afforded in the memorial exhibition at the Goupil Galleries. He had a wide outlook, but there is no question of choice between his drawings and paintings of houses and of Cockney villadom. His drawings of old barns and cottages pass muster in some cases, but his picture of "Australia House" (132) is very wide of the truth, though it has pleasing quality of its own. In many pieces his colour effects are delightful, in others they are harsh to an extreme. The pictures 109, 105, 13, 127, 129, 161, and 136 show how well he could handle colour. Many of his drawings, such as Nos. 6 and 7, are delightful.

The Goupil Galleries offer an attraction just now, besides the Bevan Exhibition, in a number of works by Stephen Bone, Rodney Burn, and Robin Guthrie. This combined exhibition would be worth seeing if only for the charming drawings by Robin Guthrie, but some good colour work by Stephen Bone and portraits by Rodney Burn add to the interest.

THE BEAUX ARTS GALLERY.

One of the best of current exhibitions is that of recent oil paintings by Julius Ollson, R.A., at the Beaux Arts Gallery. Besides some of his very characteristic work in moonlight and sunlight over tumbling seas, there are some sweet passages of colour and light, as in his "Sunset on the West Coast" and his "Summer Shower." A very admirable picture of a decorative kind is his "Chrysanthemums." There are water-colours and etchings by Walcott still on view at this gallery.

NOTES ON AMERICA—V

RAPID CONSTRUCTION.

By F. E. BENNETT, A.R.I.B.A.

A GREAT deal is said about "efficiency methods," about "speeding up," and rapid ways of working in America. People in Europe who happen to be interested will ask if these things mean anything, of what they consist, and how they apply? Very definite answers are sometimes expected, and the inquirers hope, perhaps, to be told that the American bricklayer lays, say, 200 bricks more than the Englishman per day, or that, perhaps, five English plasterers can do the work of seven American plasterers working under the same conditions, and that the reason for the difference is because of such and such a method or process. While, unfortunately, it is not possible to make such statements in regard to the process of things, the main result, one probably not disputed, is quite clear—that the Americans do build quicker than we.

Recent instances of rapid work are the Tribune Tower, Chicago, the Bush Terminal Building, New York, and also the building for the American Radiator Company, New York, each of which was built in about a year. Twelve months is a very short space of time indeed in which to put up such buildings, but although these cases are somewhat exceptional the time taken for the average of similar buildings is not very much more. The same sort of building in England takes perhaps 2½ years.

The reason why the English take longer than the Americans to erect buildings is perhaps because they don't see why they should hurry, whereas the Americans, for their purposes, do see why they should hurry.

Many Americans will claim the difference is due to their efficiency methods and hustle. However, the underlying factor is the system of land purchase, and it is that factor which forces them to hurry.

For nearly every building enterprise the freehold is bought outright, and there is no question of delayed payments or anything in the nature of a peppercorn ground-rent during building operations. Immediately the land is acquired, interest on the capital involved begins to accrue, and the longer the building takes to erect the greater the time to wait before revenue starts to come in. So it is that once a scheme is launched the dominant idea is to get the building completed as rapidly as possible. Everything is done to push on work at the fastest possible rate. If the occupant of the old building is due out, say, by twelve midnight on a certain day, the housebreakers will be on the spot at that time to commence their work of tearing down. On a space in the back garden, if there is one, or as soon as a space on the site is cleared, the new steelwork, all prepared and ready for erection, is brought in and stacked up and arranged with the stanchions and beams for the upper part of the building at the bottom of the stack and those for the lowest floors on top. Then, as soon as the debris begins to get cleared, the contractor for the foundations starts to work excavating, perhaps blasting, and digging pits for the concrete to take stanchion bases.

As the work proceeds, in the first place there is seen a great activity grubbing out the old work and preparing for new foundations. Excavating machines work away incessantly, picking, lifting, and then emptying the debris on to motor lorries which stand along the roadside, and are away as soon as filled.

A great deal is done to erect the steel frame with the greatest possible rapidity. Rapid work by steelwork contractors is usual in most countries, but here the efficiency is developed to a very high degree, the rate at which bolts and rivets are fixed being quite extraordinary. Added to this, the lightness of the steel members enables the handling to be done with greater ease. The fire stairs, which are made of steel almost completely, go up at the same time as the main framework and are available for immediate use by the workers. Framework for the lifts is also fixed in the first place and allows these methods of carriage to be employed from an early stage in the operations.

As much as possible of the finishing work is made up away from the job. Details which have to be carved in stone work, where they are near to the ground, are made in terra-cotta for higher up, where they are not seen so closely. When "stone" details are the same, the terra-cotta contractors can supply much more rapidly and cheaply than the stone carvers.

Joinery requiring craftsmanship is largely eliminated. Many doors have steel frames, all in one piece, together with architraves and linings, which merely require fixing into position and are ready to take the doors.

It is the custom to employ different contractors for every kind of trade on the job, and to have one general contractor controlling everything. This general contractor does not supply any actual building work or materials, but is paid a fee just like the architect, and in return takes the responsibility for all the sub-contractors. He sees all work carried out according to plan and specification, and, above all, according to "time," which is usually stated to be "the essence of the contract." In order to make quite sure about this question of time he draws up an elaborate schedule (pronounced *skedule*), in which the time when all materials should arrive on the job is calculated. Then he has a special man—sometimes referred to as a "go-getter"—who makes periodical visits to the workshops and stock-yards of the various sub-contractors and suppliers of material, and urges them into compliance with this schedule.

The materials have to be delivered at exactly the time they are wanted—not before and not after—so that space is always clear. Sometimes, owing to the smallness of the site and the enormous bulk of a building, the progress of the job would be absolutely impossible without this arrangement.

A peculiarity of the scaffolding is the form of bridge placed over the sidewalk when a building rises directly on the building line of a city street. A rough sketch of this form is given, and shows how materials brought to the job are hoisted on to the bridge and from there again taken up to the various floors of the building. By leaving one or more floors above the scaffolding bridge unenclosed during the earlier stages of the work the materials can be taken up into the building with great ease. The method by which walling is hung on to the framework makes this possible and is also of great assistance in constructing rapidly. By a method adopted of fixing the wall beams to the front of the stanchions a projecting ledge is formed at each floor which carries the brickwork required for the facing of that floor. This allows the brickwork to be started at almost any point in the height of the building, the steelwork nearly always being completed as a whole job before the bricklayers commence.

The diagram shows the principle of what might be called this "skin-walling." By this method the walling can be begun anywhere—preferably at the top to keep out the wet.

The scaffolding for a tall building is never built up from the ground, but is usually hung over from the top of the steel frame by ratchet windlass.

Men on a building job seem to work hard and well, and there is an atmosphere of goodwill and a feeling of equality. A man knows that if he doesn't work well and truly earn his pay, he is not likely to be retained on his job. The position is quite honest and definite, and seems to produce a good *morale* amongst everybody. They play hard, feed well, and expect good wages, and that makes it possible for them to work hard. There seems to be little idea of master and man in the way it is considered in older countries, and if a man does not get on in the world he blames himself more than the capitalist.

It is probably in the building trade more than any other that so many new Americans are to be found, for it provides a good opportunity for the employment of immigrants from abroad. They can be absorbed for their particular abilities to do definite jobs, and they can get on fairly well without having to know the language fluently. They are Europeans, or sons of Europeans, who have become American citizens; the variety of accents among them is very great, and if you address a man casually on a job, it is quite a speculation as to the way he will answer—that is, even if he understands you at all. They all speak the American English, of course, but with varying proficiency.

Much is done to employ standardisation and mass production, not only in manufacture, but also in labour. With labour of such a varying quality—much of it very poor—and a tremendous amount of building work to be done, only by formalised and ready methods can employers hope to cope with the work.

One of the great difficulties which building contractors experience is to keep men at their jobs; with an increasing demand for labour, a man is always on the look-out for a job with higher pay. It is the recognised thing for him to try many kinds of work before he can expect to find the one that suits him best. This applies not only to the building trade, but also to other trades and occupations where a specialised knowledge of a particular commercial firm is not necessary.

The effect of prohibition on the state of labour is an interesting point, for it is probably a fact that such men as the skilled and semi-skilled trade workers are the ones most affected by the "dry" laws. Whereas at one time drinking was a great drawback to the efficiency of the operatives, it is now the case that most men are comparatively teetotal. When they get hot and thirsty they don't break off and go to the public-house for beer, but content themselves with water, which is supplied to them from pails carried round by the apprentice boys.

Every pair of hands on a job must be worked to its fullest capacity, and that capacity must be of a high standard. The number of persons is cut down to the lowest, not so much for financial economy, but to prevent congestion. Work may be carried out through the night because there is not enough room by day. The pace is a very wearing one for many people concerned, but the work goes on.

One would be inclined to conclude that in this great desire for rapidity of construction too much scamping of the work results. That there is a tendency towards scamping cannot be denied, but the great risk entailed counterbalances it. Any failure in the structure might not only lead to very serious loss of life and damage to property, but also bring about the complete ruin of the building contractor's reputation.

A Great English Architect.

IN the course of a further lecture on "English Renaissance Architecture," at the Central School of Arts and Crafts, Sir Banister Fletcher, V.-P.R.I.B.A., dealt with architecture of the late seventeenth century and of the eighteenth century. That of the late seventeenth century, he said, was of an "Anglo-Classic" character, in which Classical forms were much used, and this led to a characteristically English style in the following century known as "Queen Anne" and "Georgian." At this time individual architects had become prominent, and the greatest figure before the time of the still greater Sir Christopher Wren was Inigo Jones, who introduced the tradition of Palladio in Italy. He had not the same opportunities as Sir Christopher, as England was already well equipped with churches, but his Banqueting Hall, Whitehall, was well known, and he carried out much domestic work. Houses of the late Renaissance were different from those of Elizabethan and Jacobean times, as they were chiefly of the square "block" type and developments therefrom.

Next Wednesday, March 3, Sir Banister will deal with the life and work of Sir Christopher Wren, and a lecture will then be devoted entirely to St. Paul's Cathedral.

MODERN ARCHITECTURE

LECTURING recently on this subject at the Cambridge University Society of Architects, Mr. Manning Robertson, A.R.I.B.A., said during the hundred years ending with the Great War the term "modern architecture" was devoid of any definite meaning, for the word "architecture" had come, in the public mind, to mean only archæology, and the buildings that were then modern had nothing in common one with another, or, at the most, they only resembled each other in their attempts to recapture the spirit of some past style. It was unquestionably true that architecture reflects accurately the outlook and sympathies of a nation or an epoch. One need hardly refer to the impressive mysticism of Egyptian religion, to the intellectual expansion of Greece, to the military and civic domination of Rome, to the devotional impulse of the Middle Ages, and to the reversion to classic origins and symmetry during the Renaissance. These phenomena were tolerably well known to the cultured layman; but why did our cultured laymen of the past hundred years so seldom look *en masse* at their own contemporary architecture and perceive what was to be seen in that mirror?

Was it not a perfect reflection of the nineteenth-century life and outlook? We saw the Church trying to recapture a mediæval piety by imitating mediæval mannerisms in its architecture because the piety and devotion of the day were in danger of extinction from a misunderstanding of the new discoveries of scientific men—Darwin and others. The factory was relegated to the realm of utilitarian building, where beauty and proportion were allowed no play. The great shops were designed solely with a view to ostentation—to attract the ignorant by their obvious prosperity in order to sell the maximum quantity of goods to the greatest number. The houses of the workers were built on the lines of egg boxes, but without the precautions taken for the safety of the eggs. Thus the architecture of the nineteenth century reflected an age of materialistic commerce and showed no signs of artistic vigour beyond the works of a few men of great ability, perhaps of genius, such as Elmes, who designed the St. George's Hall at Liverpool, and Barry, who was responsible for the Houses of Parliament—works amazingly brilliant in themselves, but that by their diversity one from the other emphasised the truth that there was no nineteenth-century style of architecture. This did not in the least disparage the fervour and devotion of a large body of architects, who fought an uphill battle in what was virtually a lethal chamber.

That this materialistic phase should have coincided with the greatest building activity in history was an artistic disaster—one on a scale so far-reaching and enduring that one sought in vain for a remedy. The ugly buildings with which we were surrounded would outlive us and our grandchildren, and their influence, not only of pretension but of a deadening level of mediocrity, must continue to affect the minds of those dwelling in and among them. Go where you would in the Europe of the last century and the trail was the same; a standardised uniformity and even a marshalled attempt at individualism and ornament that existed not because anyone liked it, but because they felt that something of the kind was expected.

The question naturally arose, if we were bankrupt in 1900, what has happened since—or was happening now—that made it possible for us to dream of solvency? The only possible answer was that the conditions that led to the catastrophe in the Victorian age had fundamentally changed. Indeed, to anyone who followed—however vaguely—the advances of modern physics and the speculations of men like Eddington, of that University, it must seem astounding that science should ever have imagined that it had, or ever would, explain away the mystery of life. Science was no longer the enemy of religion, nor did it claim to render religion out of date. This being so, we might expect to find a new breath of life in our church architecture. It would not be true to say that mediæval devotion was due to scientific ignorance, but we might affirm that the present awakening was due in part to scientific advance. Thus our religious outlook tended to rest on a wider vision than did the inspiration of the Middle Ages. The intangible was even more intangible to us than it was to the fourteenth century, because we knew one more way—the path of science—which did not lead to the enlightenment of the basic facts of the universe.

Art expression had acquired a significance; it was no longer regarded as a luxury to soften the so-called facts of life or to distract from their reality. In architecture we should find that the standardised details and "styles" would disappear, but a unifying acceptance of general principles would evolve and thus create a greater general uniformity in architectural form. At any given period in Gothic we might, broadly speaking, say that every church was built in the same way, with the same ornament. To-day we found individualism, but through it all we could trace the characteristics of what he believed to be the coming style, a style that cut itself free from definite classical and Gothic associations, expressed in terms more elemental than any appropriate to these schools. It relied upon a sensational and dramatic appeal rather than on one which was emotional or intellectual. We found large masses, unbroken surfaces, deep bands of shadow, and the emphasis of texture and colour. It was vivid and arresting; freer than Greek, more ornamental than Gothic. Its broad surfaces and carefully selected colour schemes, within and without, left no place for stereotyped and promiscuous ornament. What detail there was showed increased refinement in line and moulding, and a concentrated attention upon the proportion of doors, windows and fittings. It had nothing to do with the affectation of reproduction "period" work, but set out with imagination, realism and the resources of modern material to satisfy the multifarious functional demands of to-day.

One of the ablest of our architectural historians and writers deplored, in a trenchant article in the current issue of the *Quarterly Review*, any attempt at cutting ourselves free from our great tradition in architecture, and if there were any real danger of the freakish innovation that he seemed to anticipate we might well hesitate before embarking upon an adventure that might land us into a mere striving after sensation, using the word in its modern journalistic significance. But what he (the speaker) conceived to be the new architecture was based upon the elemental traditions that were handed down as the basis of all past styles, and that was as remote as possible from the bizarre and the eccentric.

The new cathedral at Liverpool was essentially a transitional building. Its symmetry was classical—note the dominating central tower and the absence of western towers—its detail was Gothic in feeling but not in mannerism. It seemed to herald a developing conception of Christianity and its mission.

But it was not only a broader view of religion—if we might so describe it—that would affect our church architecture. At the moment money was scarce and was hardly able to cover half what it could do in 1913. Now it was obvious, apart from its merits as a form of expression, that a church designed on Gothic lines cost about twice as much as a simple brick, stone, or concrete building that relied on proportion in place of elaboration, and this fact was responsible in a considerable degree for the modern interpretation of a building suitable for worship.

Having described many modern buildings, both at home and abroad, the lecturer said, in conclusion, that, in looking at architecture, it was peculiarly necessary to rid oneself of predilection for one style or another. The man who could only appreciate Gothic was like the musician who could only respond to Bach. We should look at modern buildings, not to see how far they conformed to our own notions, but rather to put ourselves in the architect's place and try to understand what he was aiming at. Admittedly the majority of present-day buildings, like most of those of the past century, proclaimed immediately that they embodied no aim beyond appearing conventional, or perhaps grandiose; but there were springing up buildings with a definitely modern urge, and if these at first sight often seem unaccountably bleak we should be sufficiently humble to refrain from adverse judgment until we had seen enough of them to feel sure that they conveyed no message.

In summarising the modern movement in England, one must say that it reverted to more elemental principles. It took its materials, many of them new ones, and then applied them to problems, again often new ones, with a view mainly to the dramatic effect of large masses, of harmonising or contrasting textures or colours, and to the effect of small details of decoration suitably placed. But if these stirrings in the architect's world were to produce a real twentieth-century style of architecture, it was above all necessary to enlist the sympathy of the cultured layman and the lay press. The education of the masses could only be extended through the channel of the cultured few, and when these understood that architecture should be a modern vital art and not merely a conventional mask borrowed from the past, we should produce an architecture that would induce our descendants to say "the Twentieth Century was no longer an age of revivals and imitators, but it evolved its own characteristic and powerful style of building that permeated all the building of the period."

SCHOOLS OF ARCHITECTURE

The Council of the R.I.B.A., acting on the recommendation of their Board of Architectural Education, appointed in 1924 a Visiting Board to visit and assist those schools of Architecture throughout the country applying for exemption from the R.I.B.A. Examinations, or whose courses are recognised by the R.I.B.A. for the purpose of exemption from its examinations. The Visiting Board is composed of the Chairman of the Board of Architectural Education, who acts as Chairman of the Visiting Board, a Vice-Chairman, the Hon. Secretary, and a Teaching Member of the Board of Architectural Education. In addition, one of H.M. Board of Education's Inspectors accompanies the Visiting Board upon its visits to those Schools of Architecture which have official relations with H.M. Board of Education.

The Council of the R.I.B.A. has now received from the Board of Architectural Education a report of the action taken, as a result of the reports of the Visiting Board, by the Schools visited during the last two years. The following Schools are included in the report:—The Architectural Association School of Architecture University of Manchester School of Architecture, The Northern Polytechnic, Department of Architecture, Surveying and Building, University of Cambridge School of Architecture, University of Liverpool School of Architecture, Edinburgh College of Art, School of Architecture, Royal West of England Academy School of Architecture, Bristol, The Technical College, Cardiff, Department of Architecture, University of London, Bartlett School of Architecture.

The reports from the various Schools show that the suggestions made by the Visiting Board have been found to be of great value, and the Board of Architectural Education has received numerous letters from the Schools visited expressing gratitude for the helpful action of the Visiting Board.

THE CONDITION OF THE BUILDING INDUSTRY

MR. HERBERT A. WELCH, F.R.I.B.A., reading a paper on this subject before the Nottingham and Derby Architectural Society recently, said it would be a dull and unreceptive mind which had yet to become conscious of the fact that in every section of industry there was to-day apparent a totally different spirit and outlook from that which existed, say, 10 to 15 years ago. In the building industry Labour had acquired an added sense of power, due in part to the economic position resulting from the greater demand for its services in relation to the supply, and in part to the increased strength of the Labour Party, composed mainly of representatives of the trade unions. Employers faced with the changed conditions due in part to these causes, and in part to the much changed national and international conditions operating generally since 1914, and in addition to the less recent but by no means less important development of the system of sub-contracting, found the need for a considerable measure of adjustment, if not for an entire reorganisation of the industry, in order satisfactorily to meet these changed conditions.

The time had arrived when a decision had to be reached as to whether satisfactory progress could be made by the use of the old machinery, overhauled in order to make it satisfactorily function under the new conditions, or, if better results might be obtained by scrapping at least some of the existing machinery, for the purpose of replacing it with new and more up-to-date plant. While appreciating the natural desire and inclination to build upon past experience and the tendency to compare to-day's conditions with those of the past, with a view to making them dovetail wherever possible, he considered, nevertheless, that the distant past offered us but little help towards finding a solution for present-day difficulties. Whilst we should to some extent be guided by events in the history of the industry, we must not allow ourselves to become fettered by decisions arrived at in the past under conditions which no longer existed.

He was of the opinion that there existed at present a tendency to view the subject of the management and development of the industry from a too narrow standpoint. If the industry was properly to function under the changed conditions with which it was confronted, the existing machinery must, to a large extent, be replaced by more up-to-date plant, which would be capable of assuring more satisfactory results.

In the not too distant past the industry consisted mainly of the builders, unions (not nearly of such magnitude and importance as now), architects, and a comparatively few merchants and sub-contractors, who supplied such materials and performed such work *only* as the builder and his staff were then unable with equal facility and economy themselves to supply and perform. The builder then depended, and was happy to depend, mainly upon the ability of himself and his staff satisfactorily to carry out the work entrusted to him. To what degree did we to-day find these conditions changed? In order to prepare his estimates on a more equitable and more economical basis the builder required, in addition to the architect's drawings, to be supplied with a bill of quantities, prepared by a properly qualified quantity surveyor, whose services were again sought at the completion of the work for the purpose of adjusting variations. That, however, was but a beginning. Immediately upon the signing of the contract the builder no longer proceeded to produce by his own staff the major part of the work necessary for the completion of the structure, but architect and builder proceeded to set in motion the efforts of various sub-contractors, whose callings were legion, and who, at the various stages, supplied or "supplied and fixed" into position the various parts of the structure. In effect the builder had, to an appreciable extent, developed less along the lines of a master craftsman, and more along the lines of a financier and a co-ordinator of the work of sub-contractors. In consequence of this change the number of parties interested in the industry—whose interests could not under existing conditions be ignored—had greatly increased.

In spite of the increase in the numbers of the parties interested we were recently told by Mr. W. H. Nicholls (past-President National Federation Building Trades Employers) that the best brains were no longer coming into the industry. But why were not the best brains seeking employment in the industry? Clearly because the industry offered fewer inducements than other callings. How long could this state of things be allowed to continue? Obviously we could not long be satisfied with second- and third-quality brains; but unless a move be quickly made to induce the right type of young man to follow the crafts, in due course second and third quality brains would cease to be available, and we should perforce have to accept what we might term mental "Grizzles!" It was for the industry to see to it that the conditions affecting the crafts were such that the younger men with A1 brains would return and return quickly to what had ever been a traditionally high calling. It was a reflection upon the building industry that at a time of great national shortage it had been unable to cope with the public demand for houses, and at the same time tackle the normal building work necessary in other directions. True, the total demand had been abnormal, but an intelligent and enlightened industry should have been able so to adjust itself by this time as to render it unnecessary for the Government to insist upon calling in the engineering industry to assist in the provision of houses for the community. When referring to the building industry in this matter his remarks were intended to embrace manufacturers, merchants and others upon whom to an appreciable extent the builders depended. Had all these parties met together some five years or so ago for the purpose of giving consideration to the then changed conditions and demands, and had they remained in close consultation and co-operation in the meantime, it would appear likely that at this time the industry would have been well able to meet the public demands. In the light of recent experiences the public had a right to be assured that such a state of affairs should not recur. He feared, however, that there were no clear indications at present that such an assurance could with confidence be given. This in his opinion could be done only when the active interest in the industry was placed upon wider foundations, by the admission into its Councils of representatives of a greater number of the parties interested, who would thereby become more closely associated with its welfare. Greater and wider collaboration than at present exists was essential.

They doubtless were aware that existing agreements terminated this month, and that discussions were and had been for some time taking place between the employers and employees for the purpose of drawing up new agreements which would govern the industry for a further term of years. He hoped and was sure all hoped, that these discussions would result in a satisfactory settlement of all matters outstanding, and that the industry would proceed to enjoy a long prosperity.

He did not wish to be unduly critical of the procedure which was being followed now as in the past, in respect to the discussion and formulation of these agreements, which among other matters must deal (and should deal with wide vision and reasonableness) with such matters as wages, hours of working, overtime, wet time, output, apprenticeship, organisation, supply of materials and other matters, some of which were admittedly best dealt with only by the two parties mentioned. He did, however, suggest in regard to a great proportion of the matters which must necessarily be considered that the time had arrived when at least architects and surveyors should have full knowledge of matters in dispute and should be consulted before a decision had been arrived at. Enjoying, as they did, a very intimate knowledge of the industry, and possessing the average amount of common sense and goodwill and, moreover, by virtue of the judicial authority they were accustomed to wield between clients and the builders, architects were well qualified and equipped to contribute something toward the common good. When he had the honour recently to read a paper on this subject at the R.I.B.A., the principal representatives of the profession, employers and employees, who spoke expressed a willingness to co-operate along the lines he had indicated. They hoped for and awaited a move in this direction.

In America during recent years considerable progress had been made along the lines of close co-operation between those interested in the industry. There existed in New York and several other large cities and districts, a Building Congress, the membership of which was comprised of representatives of financiers, architects, surveyors, engineers, contractors, sub-contractors, trade unions, equipment dealers, material manufacturers, and the general interests, including the Press and education authorities.

These Congress groups dealt with apprenticeship, seasonal employment, codes, publicity, research, survey, standardisation, elimination of waste, and building conditions generally. It was abundantly clear from the information to hand that much useful work had been and was being done by these bodies, and that better organisation and clearer understanding had resulted from the closer co-operation between the parties concerned.

Whether or not it was desirable in this country to proceed along similar lines needed close consideration and discussion. As a first step, however, he thought that an experiment for a limited period—say, 3 or 5 years—might be made by the formation in various districts of local organisations composed of architects, quantity surveyors, builders and operatives to consider from time to time matters of importance concerning the welfare of the industry. However much conditions might vary in different localities, the principle of closer co-operation and mutual understanding remained uniform.

MEETINGS

FRIDAY, *February* 26.

London Master Asphalters' Association.—Annual Dinner. At Restaurant Frascati, Oxford-street, W.1. 7 p.m.

MONDAY, *March* 1.

Royal Institute of British Architects.—Lieut.-Col. H. W. G. Cole on "The Paris Exhibition of 1925." 8 p.m.

Liverpool Architectural Society.—Sir Giles Gilbert Scott, R.A., on "Liverpool Cathedral." At 13, Harrington-street.

The Society of Engineers.—Mr. W. M. Beckett on "Tidal Power on the River Severn: Some Notes and Suggestions on its Utilisation." At Burlington House, W.1. 5.30 p.m.

WEDNESDAY, *March* 3.

L.C.C. Central School of Arts and Crafts.—Sir Banister Fletcher, V.-P.R.I.B.A., on "Sir Christopher Wren and His Works." 6 p.m.

The Institution of Civil Engineers.—Discussion on "Road Construction," to be introduced by Mr. H. E. Lightfoot. At Great George-street, S.W.1. 6 p.m.

THURSDAY, *March* 4.

Institution of Structural Engineers.—Mr. S. Bylander on "Steelwork Specifications." At 296, Vauxhall Bridge-road, S.W.1. 7.30 p.m.

The Auctioneers' and Estate Agents' Institute.—Mr. S. A. Smith, on "Modern Practice in Regard to Compulsory Purchase." At 29, Lincoln's Inn-fields, W.C. 2. 7.30 p.m.

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ILLUSTRATIONS

Hambros Bank, Bishopsgate.

We give on page 352 a description of this new building, the architects of which are Messrs. Niven & Wigglesworth, FF.R.I.B.A. Following is a list of the firms engaged on the work:—

The general contractors were Messrs. Trollope & Colls, Ltd., and the sub-contractors were as follows:—Messrs. Aston Construction Co., Ltd. (constructional steelwork); Bath & Portland Stone Firms, Ltd. (general masonry); Kleine Patent Fire Resisting Flooring Syndicate, Ltd. (fireproof flooring); Ashwell & Nesbit, Ltd. (heating and ventilating engineers); Alfred Williams & Co., Ltd. (hydraulic engineers, well sinking); Stuart's Granolithic Co., Ltd. (granolithic paving, sand and cement screeding, etc.); Ratner Safe Co., Ltd. (safe construction and strong-room doors); Express Lift Co., Ltd. (lifts); Electrical Installations, Ltd. (electric light installation); General Electric Co., Ltd. (electric fittings); Reliance Telephone Co., Ltd. (internal inter-communicating telephone); Crittall Manufacturing Co., Ltd. (metal windows and partition screens); Henry Hope & Sons, Ltd. (skylights and lantern lights); Roberts Adlard & Co. (Bromley), Ltd. (roof tiling and slating); Mellowes & Co., Ltd. (sanitary fittings); H. T. Jenkins & Son, Ltd., Torquay (marble work); Bryon & Co. (wall and floor tiling and terrazzo floors); Mr. Laurence A. Turner (stone and wood carving, and fibrous plaster work); Messrs. J. W. Singer & Sons, Ltd. (ornamental wrought iron gates and staircase balustrade); Mr. C. Hall (wrought-iron balustrade); Synchronome Co., Ltd. (tell-tale and synchronome clocks); Luxfer Co. (pavement lights, etc.); Yannedis & Co. (ironmongery, counter grilles, etc.); James Slater & Co., Ltd. (kitchen equipment); John Elbo (cork flooring); Art Metal Equipment Co., Ltd. (steel shelving for strong rooms); Leyland & Birmingham Rubber Co., Ltd. (rubber flooring); Acme Flooring & Paving Co. (1904), Ltd. (wood block flooring).

The Middlesex Hospital Annexe.

The buildings which have just been occupied by the authorities of the Middlesex Hospital as an annexe for patients pending the rebuilding of the old part of the hospital buildings, was at one time the Central London Sick Asylum, and used as an infirmary by several parishes jointly, and was a characteristic specimen of the kind of accommodation considered suitable for the reception of sick paupers. The hospital authorities have acquired the premises from the Westminster City Council, and when opportunities were given for surveying them in detail it was found that they were in a very bad state of repair, and it was clear that difficult and costly structural alterations and additions would have to be made before the buildings could be rendered fit for use as a hospital.

The buildings consist of, first, the main administration block, facing Cleveland-street; secondly, two large ward blocks, running east and west behind the administration block. Each block contains three wards and their adjuncts. Thirdly, nurses' and doctors' houses on the north and south sides of the site respectively; and lastly, at the back in the south-east corner, a small block adapted as a mortuary and viewing chapel. Generally, the whole of the old wooden floors of the building had to be taken out, all the old chimney stacks pulled down, and a good deal of the old brickwork in external and internal walls had to be demolished, and rebuilt. A new roof has been built over the whole block. New floors, carried on steel stanchions and beams, were put in, and the finished floors, except for the first floor, are of teak. Elaborate fire precautions, as laid down by the London County Council, have had to be arranged, not only in this building, but also in the ward blocks and the other houses. In the centre at basement level, between the ward blocks, and connected by corridors to them and the administration block, are the large main kitchen, cold storage, larders, etc. The kitchen is fully equipped with the latest modern steam, electric, and gas-cooking apparatus.

The three wards in each block are identical in detail, and consist of a large general ward of 30 beds with sanitary offices, approached from the centre of one side, with sister's room, ward kitchen, bath, linen and testing rooms, arranged at the entrance end, and all fitted up with the proper fittings. Balconies at the eastern end of wards provide, with an outside staircase, adequate alternative means of escape from fire. The wards are floored with teak, the sanitary offices are floored with terrazzo, and the walls tiled.

Considerable structural alterations had to be carried out when dealing with the ward blocks. All the floors had to be strengthened by having additional steel beams inserted; the floors of the sanitary offices were completely reconstructed in concrete. The testing and linen rooms were formed by taking a portion off the wards, all the walls were hacked and plastered, new fireplaces inserted and complete heating and hot water and electric lighting services run. The whole of the blocks have been completely redecorated from basement to roof. The various houses and outbuildings have been completely renovated and redecorated for use as maids' quarters, nurses' cloakrooms, etc., and resident quarters for sisters and doctors. Each block has a new electric light system, gas fires, and hot and cold water services. Adequate arrangements have been made to comply with the L.C.C. requirements for escape from fire. In the front courtyard two new entrances have been formed in the new wall, and the whole of the court has had to be raised in level and relaid.

The general contractors were Messrs. Holland & Hannen and Cubitts Ltd. (general foreman, Mr. Wheeler), and the principal sub-contractors were as follows:—Messrs. James Slater & Co., Ltd. (heating and hot water service, cooking apparatus, and sterilisers); Dent & Hellyer, Ltd. (internal and external plumbing and all sanitary fittings); Girdlestone & Co., Ltd. (electric lighting and power services; two Scialytic lights are installed in the operating rooms); The Gas Light & Coke Co., Ltd. (gas apparatus); Medways Lift Co., Ltd. (electric passenger lift); Burt & Potts, Ltd. (special metal windows in operating rooms); Light Steelwork (1925) (escape staircases); Mr. Blackmore (gates and railings); Avery & Co. (photographic dark blinds); Spencer Molton & Co., Ltd. (rubber flooring—a gift from the Rubber Growers' Association); Korkoid & Ruboleum Co. (the Ruboleum floor; gave one

The Assembly Rooms, Salisbury.

TIMBER-FRAMED SIDE WALLS OF CONCERT ROOM.

operating room floor as a gift); Catesby & Co. (linoleum); Harland & Sons (enamel in wards); Lewis Berger & Sons (special paints for operating rooms, which are being done free of cost to the hospital); Fawcett Construction Co. (constructional steelwork to administration block); Kent's Chrystopal Co. (tiling in sanitary offices and elsewhere); Van Straaten, Ltd. (tiling in kitchen, etc.); Diespeker & Co. (terrazzo floors in sanitary offices); Ewart & Son, Ltd. (copper roofs in administration block).

The work has been carried out from the plans and under the superintendence of the architect to the hospital, Mr. Alner W. Hall (Young & Hall), F.R.I.B.A.

"The Builder" Prize for Measured Drawings.

The prize for measured drawings made by third and fourth year students of the University of London (University College) School of Architecture during the vacations of the year 1925 was awarded to Miss Margaret A. de Quincey. Her drawings included those of the Moot Hall, Aldeburgh, Suffolk, reproduced in this issue. This hall was built during the reign of Henry VIII as a town hall, and for the meetings of the justices, and it still serves its ancient purpose. The building was at one time in the centre of the town, but now, owing to the encroachment of the sea, is only about two hundred yards from the beach. Other prize drawings will be published later.

The Assembly Rooms, Salisbury.

An interesting reconstruction of a block of buildings known as The Assembly Rooms, standing at the corner of High-street and the New Canal, Salisbury, has just been completed for Messrs. W. H. Smith & Son from the plans and under the supervision of Messrs. Blount & Williamson, F.R.I.B.A. and A.R.I.B.A., of Salisbury and London, in close collaboration with the firm's estate manager and architect, Mr. F. C. Bayliss, F.R.I.B.A.

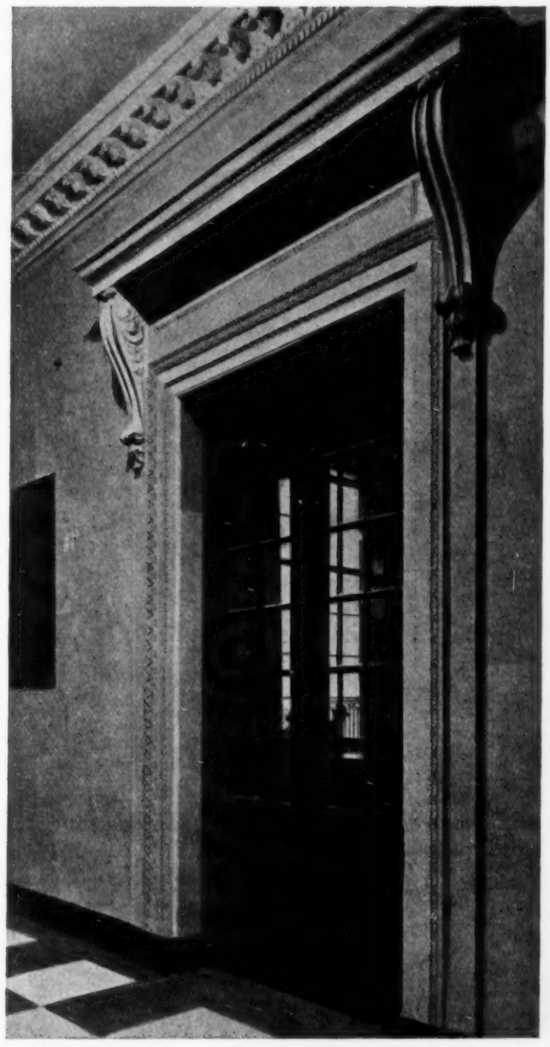
It was not until work actually commenced that it was possible to discover in what a precarious state of repair the building existed, and the idea of preserving the old timbers had to be abandoned. Much of the old work was so unsound that the contractors, Messrs. Wise & Lansdell (Salisbury), Ltd., deserve great credit for the way in which they carried out the work without accident.

From the middle of the eighteenth century until 1798 the Assembly Rooms appear to have belonged to the Fountain Tavern, which then occupied the site, and the cellars of which only now have been demolished to be replaced by a portion of the shop floor. The large hall, now restored, with its timber-framed and tile-hung walls, is probably much the same in size as in 1760. The rooms were reconstructed by the "Tontine" Company in 1804. After a lapse of a hundred years it was recognised that the rooms were unsafe for large gatherings and their use became more restricted till finally, during the war, the block was used as a central mess for the troops and the corner became an eyesore. The rooms occupy the whole of the upper floor, and the accommodation comprises a dance hall (60 ft. by 30 ft. by 23 ft.), a minor hall (40 ft. by 22 ft. by 18 ft.), a crush lobby (28 ft. by 15 ft.), cloakrooms and platform dressing-rooms. Adjoining the crush lobby and minor hall a small kitchen is planned for use in connection with supper parties, etc.

The staircase, floors, panelling to stair, crush lobby and minor hall are all carried out in Austrian oak, as are also the doors and windows generally. Except for the entrance to the Assembly Rooms the whole of the ground floor is covered by the shop and library of Messrs. W. H. Smith & Son, and measures 73 ft. by 48 ft. (average), exclusive of stock and staff rooms at rear.

The architectural treatment adopted strives to combine characteristics of the extended period with which these rooms are connected, and to recover harmony with older buildings adjoining. The lower story is divided up into bays by stone piers of Horsecombe natural facings with caps and bases of dressed Chilmark stone, the bays being filled with curved oak windows in small squares (forming the shop front) and surmounted by oak cornice. Above each pier the frieze is broken by carved shields charged with arms of Schools and Universities in their proper colours. This treatment is interrupted on the new canal frontage by the Assembly Rooms entrance with its projecting stone canopy and recessed doorway. The upper story at the end next the old tile hung wall of the concert room is faced with dark two-inch bricks, and white plaster on the block facing High-street, pierced by circular-headed windows. A projecting cornice of Chilmark stone with square modillons carry a cast lead moulded and enriched eaves gutter. The old parapet concealing tile hipped roof is now removed, the eaves extended and the ridge surmounted by a four-dial copper turret with weather-vane terminal.

The shop entrance and fittings (to the design of Messrs. W. H. Smith & Son) were carried out by Messrs. Haskins & Bros., Walthamstow, London, E.17. The other special contractors were as follows:—The Stratford-on-Avon Guild, Ltd., Stratford-on-Avon, ornamental lead and plaster work; Messrs. Rosser & Russell, London, W.1, heating; Messrs. S. Cooper & Co., Bournemouth, electricians; Messrs. A. G. Burrell & Co., Sheffield, electric clocks; The Acme Flooring & Paving Co., Victoria Park, London, E.9, wood block flooring; Messrs. F. Morton, Jun., & Co., London, W.C.1, spring dance floor; Messrs. Noyes & Green, Salisbury, carved oak fascia; Messrs. Turner, Lord & Co., London, W.1, decorators; The General Electric Co., London, W.C.2, electric light fittings.



Messrs. Hambros Bank, Bishopsgate, E.C.: Entrance to Banking Hall.

The New G.P.O., Dublin.

We publish this week a drawing showing the new G.P.O., Dublin, as it will appear when completed. The main façade to O'Connell-street, including the portico, and as far as the pavilion ends on each side is being retained out of the original building, and the drawing shows these features together with new shopping centre to Henry-street, with Post Office Departments overhead, which is entirely new. Mr. T. J. Byrne, A.R.I.B.A., chief architect to the Office of Public Works, is in complete charge of the scheme as far as the Government is concerned, all working drawings and the supervision of the work erected or in course of erection being under Mr. P. J. Munden, M.R.I.A.I., L.R.I.B.A., who is acting as architect for the lessees.

OBITUARY

Mr. Richard Wellings Thomas, County Surveyor of Radnorshire for 25 years, has died at Llandrindod Wells, at the age of 49.

We regret to record the death, on February 18, of Mr. John Harold Kennard, F.R.I.B.A., of Amersham, Bucks., and 12, Gray's Inn-square, W.C.1.

Mr. C. H. Ashworth, F.R.I.B.A., F.R.I.A.I., M.I.C.E.I., of Messrs. Ashworth & Smith, architects, Dublin, died recently.

AS EXISTING FROM 1806 TO 1923.

AS ALTERED.

Reconstruction of the Assembly Rooms, Salisbury.

MESSRS. BLOUNT & WILLIAMSON, F. & A.R.I.B.A Architects.

New Premises for Messrs. Hambros Bank, Ltd., Bishopsgate, E.C.: The Banking Hall.

Messrs. Niven & Wigglesworth, FF.R.I.B.A., Architects.

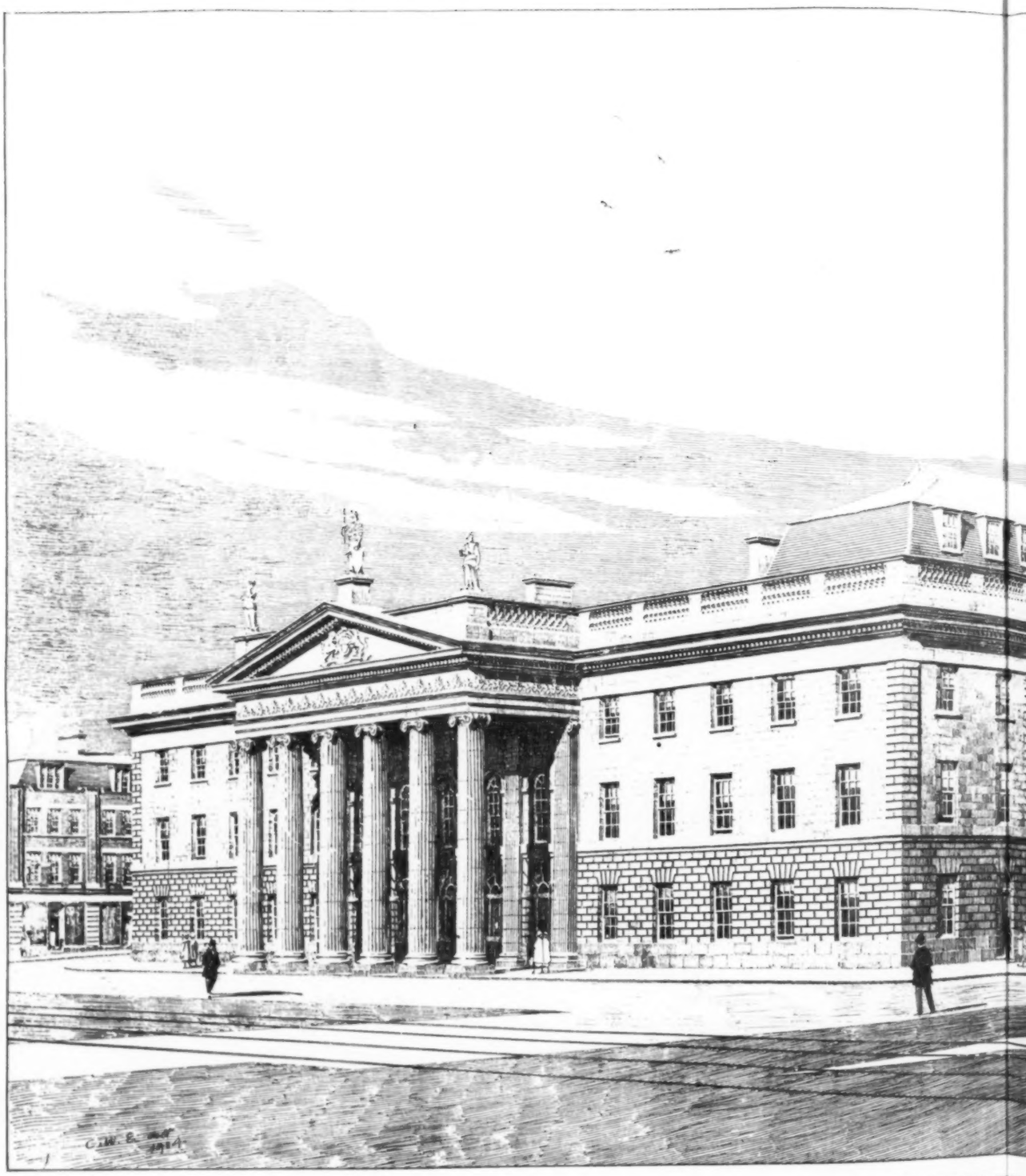
UNIV. OF MICH.

Messrs. Niven & Wigglesworth, FF.R.I.B.A., Architects.

UNIV. OF MICH.

NEW BANKING PREMISES, BISHOPSGATE, E.C., FOR MESSRS. HAMBRO BROS.

MESSRS. NIVEN & WIGGLESWORTH, FF.R.I.B.A., ARCHITECTS.



THE GENERAL POST

MR. T. H. BRYNE, A.R.I.B.A., CHIEF ARCHITECT,

MR. P. J. MUNDEN, M.R.I.A.I., ARCHITECT FOR T

ST OFFICE, DUBLIN.

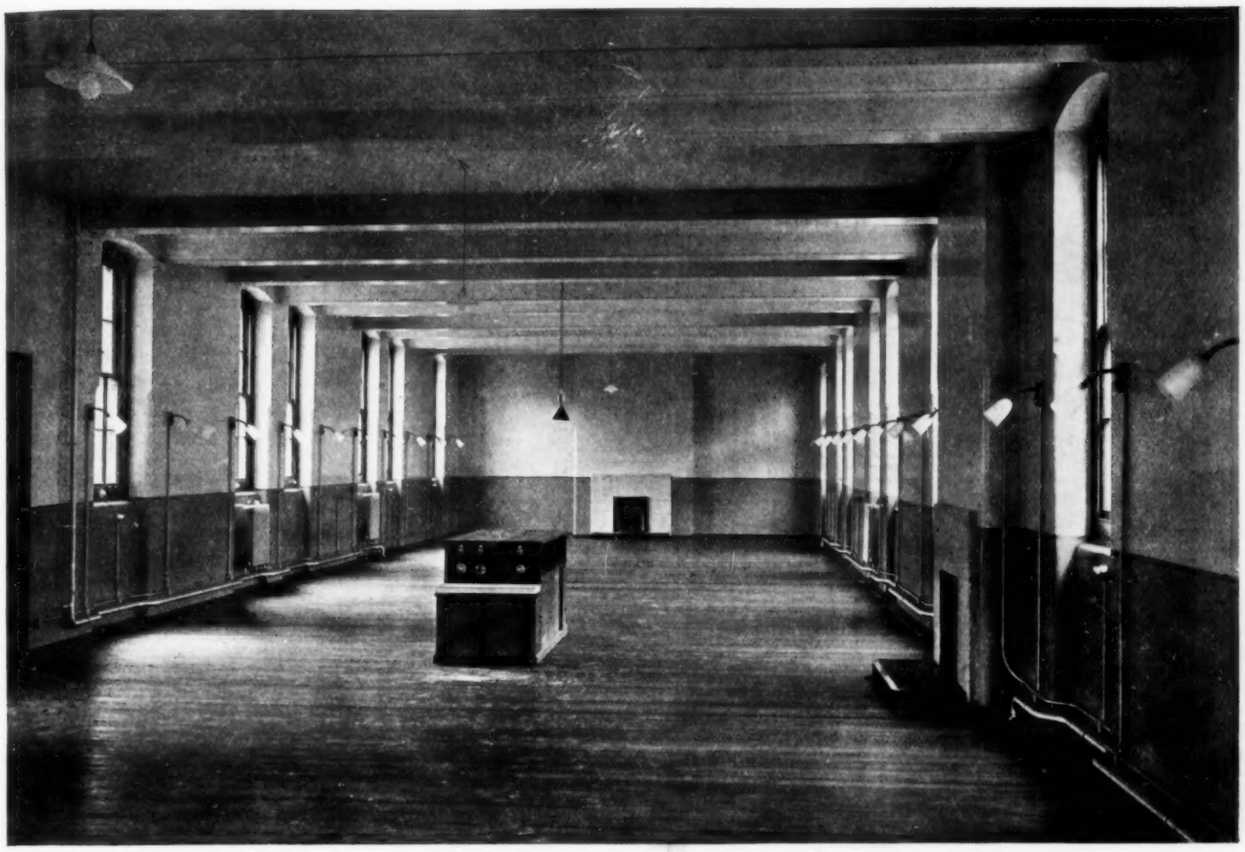
CT, OFFICE OF PUBLIC WORKS, ARCHITECT; AND
THE LESSEES.

THE STAIRCASE.

VIEW LOOKING INTO BANKING HALL.

New Premises for Messrs. Hambros Bank, Ltd., Bishopsgate, E.C.

MESSRS. NIVEN & WIGGLESWORTH, FF.R.I.B.A., Architects.

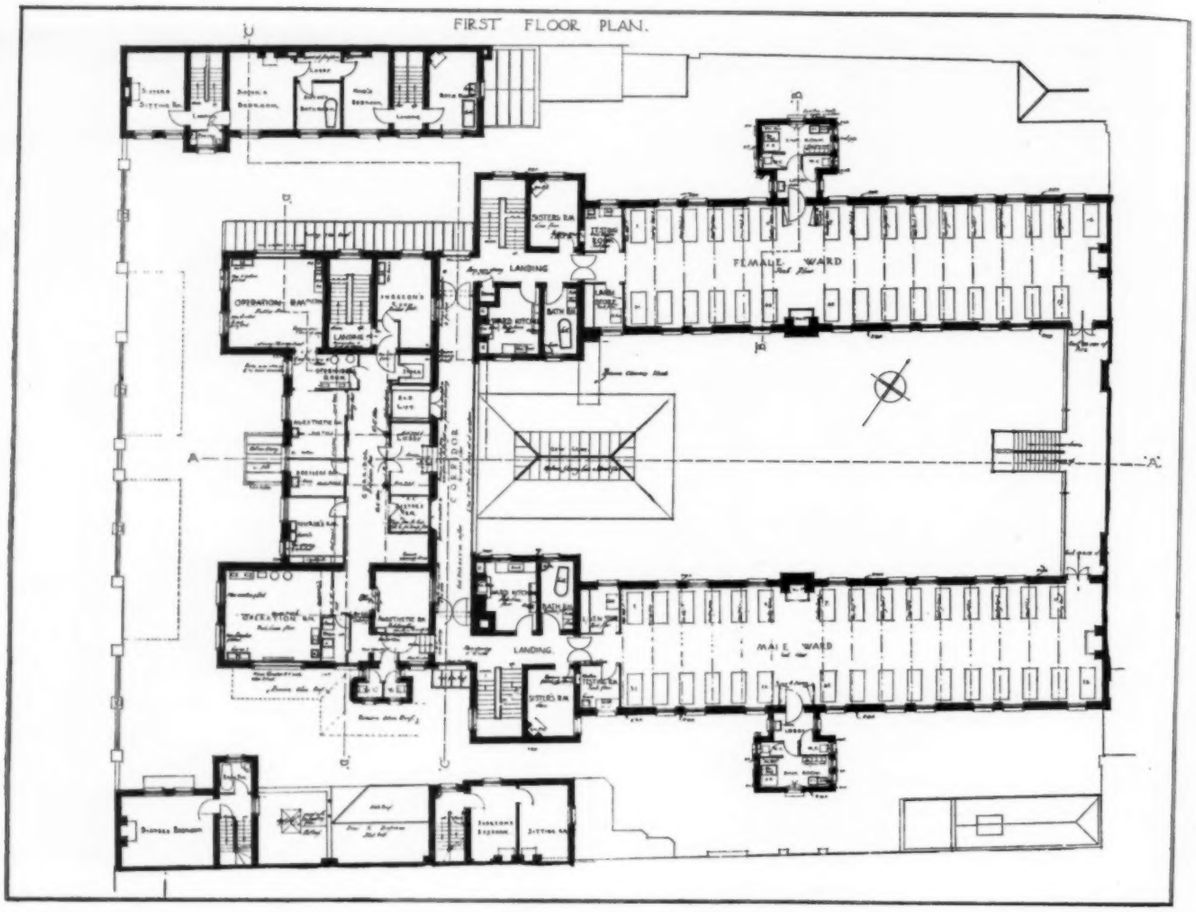


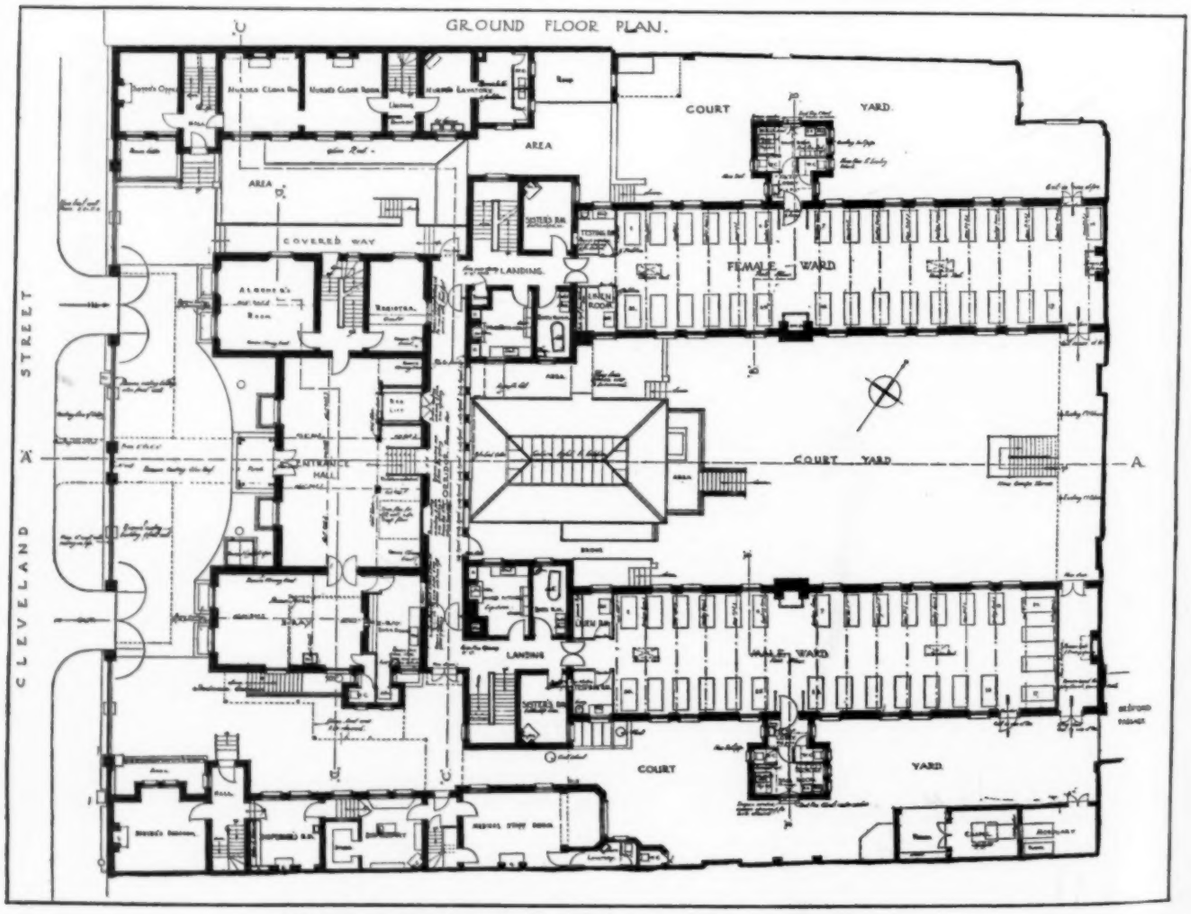
GROUND-FLOOR WARD AFTER ALTERATIONS

CLEVELAND-STREET FRONT AFTER ALTERATIONS.

Middlesex Hospital Annexe, Cleveland-street, W.

MR. ALNER W. HALL (MESSRS. YOUNG & HALL), Architect.





Middlesex Hospital Annexe, Cleveland-street, W. Plans.

MR. ALNER W. HALL (MESSRS. YOUNG & HALL), Architect.

TOWN PLANNING INSTITUTE

PROFESSOR PATRICK ABERCROMBIE (President) took the chair at the ordinary meeting of the Town-Planning Institute held at the rooms of the Institute of Municipal and County Engineers on February 12, when Messrs. E. R. Abbott and H. V. Lanchester introduced the subject of "A Development Scheme for a Town and its Surroundings and its Relation to Regional Planning."

Mr. E. R. Abbott said the subject was exceedingly comprehensive and somewhat difficult to deal with except on general lines. At present the powers of the local authority were limited to provisions with regard to space about buildings, limiting the number of buildings, and prescribing the height or character of buildings. The proposal was, he believed, now to leave it to them to plan the whole of their district without restriction. The following considerations appeared to him to arise on the question of why it was necessary to have such powers:—(1) First, the scheme for dealing with the undeveloped part of the town cannot be complete without including the land already built upon; (2) under the provisions of section 3 of the Act of 1925, an obligation is placed upon all borough and district councils with a population of more than 20,000 to prepare a scheme for their area, and if they are built upon there is not much to be done; (3) owing to traffic considerations, some local authorities are desirous of using the procedure of the Town-Planning Act to secure future widenings and improvement of streets in the centres of towns; (4) again, owing to the wearing out of a large number of old buildings, local authorities desire that rebuilding schemes shall be carried out upon a definite plan, although perhaps the area is not ripe for an improvement scheme under the Housing Acts; (5) it is very inconvenient to have provisions of a town-planning scheme applying to one part of a town and not to the remainder.

For the purpose of this paper he assumed that the expert town-planner had prepared his scheme in detail, having doubtless given consideration to questions of traffic, the preservation of historic and artistic features, the proper allocation of residences for the inhabitants, necessary facilities for shopping and factories and other buildings for the development of industry. The next step was to hand over the plan to the town clerk, and possibly the borough treasurer, to see what they had to say about it, and here difficulties would arise, not because these officials were without vision or were ultra-conservative, but because it was their duty to look at the scheme from legal and financial aspects.

Probably they would find in the forefront proposals for wide avenues through the town for the purpose of "facilitating traffic." Now of these proposals, they must beware—facilitating traffic might mean merely providing for fast traffic which in the town would be slow. If their scheme was going to provide for much of this the cost would be enormous. The fixing of building and improvement lines, in view of recent legislation, involved compensation—whether paid at once or when the improvement took place—and the frontagers to a main but narrow shopping thoroughfare would not be particularly anxious for the so-called improvement, they would say that "facilitating traffic" would very likely mean fast traffic passing their shops or even laying down of tram lines which, so far from being an advantage, would be a direct loss to them. They must never forget that some of the best shops and the most lucrative were in the old-fashioned narrow streets of their towns. So far as improvement of streets on the frontage of which shops had to be erected, he did not think they could look to any betterment charge as the means of providing the cost, and he suggested that so far as improvements in towns were required, from a through traffic point of view, the proper course was to make this a regional charge. So far as regarded the provisions of open spaces for recreation and games, these surely must be provided in the suburbs of the town, and facilities for reaching them must be by public conveyance.

The building by-laws in force in the various towns contained certain clauses as to the provision of open space in the front and rear of buildings. He was inclined to think that with regard to provisions as to space about buildings (in other words, limitation of the number of buildings) they could not expect anything; indeed, he was not sure that anything was necessary beyond the clauses of the by-laws so far as applied to the portion of the town already fully developed. There was a tendency to whittle down these clauses, but if they were continued as at present, he thought the framers of a scheme might be satisfied. He therefore suggested that there should be no limitation other than the by-law provisions within a defined area in the centre of the town, that within a further defined area or areas there should be reasonable limits until the suburban portion was reached with the usual town planning limits of, say, 12, 8, 6 and 4, or even 2 or 1 to the acre. If some such provisions as these were made, he urged they could still retain the valuable powers eliminating compensation. The provisions as to height and character involved much consideration. Height was a controversial subject among architects. As a layman in this matter, he could not but feel that if buildings higher than those generally erected in this country were to be allowed, they should only be allowed where additional width of street or open space was given up without compensation.

As to character—say we had a town where private dwelling-houses, residential flats, shops, business premises and factories were all more or less huddled together. How was this to be improved? Here, if anything was to be done, the plan must be quite definite—the ladylike model clauses as to character must be scrapped so far as the developed portion of the town was concerned, and they must return to the manly, uncompromising provisions of the earlier town-planning schemes.

There would be no objection to inserting in the scheme provisions giving the local authority power to acquire and get rid of buildings which were detrimental to a restricted area, and it would seem equitable, again, that another area which benefited by the removal should be subject to a special charge by way of betterment. He thought it would be agreed that if any such betterment charges as outlined were to be levied, the provisions of the scheme as to character must be quite definite and clear.

Mr. H. V. Lanchester said they would do well to endeavour to picture to themselves what the town was to be like that they had in mind. There could be no hard and fast uniformity about this; no two places exhibit exactly the same type of development. Nature, function and tradition all influenced this and all their ideals must be qualified by the conditions so imposed. At the same time, certain basic requirements were universally applicable, and perhaps they might first and foremost predicate that the city should be orderly, a demand that would probably make a wider appeal than any other. It was the disorder of the modern town that had worked the widespread discontent which might be regarded as a great asset by the town-planner. No means other than the extension of town planning to the entire area would make this possible. The existing powers could do something, but even if most skilfully applied, this something was only patchwork. They could clear unhealthy areas and re-allocate these for the purpose considered most appropriate. They could widen streets, either immediately or gradually, or cut new ones, where the traffic was congested.

They could even reorganise an area if this was proved to be essential to a town-planning development scheme. There were other powers, but none were comprehensive in their nature except those they could class as Building Acts and By-laws, and the comparatively recent ones conferred by the Public Health Act, 1925, and the Roads Improvement Act, 1925.

They could not immediately set to work to pull their towns to bits and reconstruct them, however much they appeared to require it. Provision for gradual movements was needed, and only the most intimate study of existing conditions and the lines of development that had led up to those would give the basis on which to frame a forecast to be employed in determining such regulations and planning as would bring about system and order. It was obvious that they must allow of the maximum flexibility consistent to the degree of regulation demanded by economy, hygiene and amenity, the components of a well-conceived civic organism. As to the factors in a scheme of a built-up area, clearly the zoning regulations must take precedence as determining its general lines, but before definite conclusions could be arrived at it would be necessary to pass on other aspects, such as traffic possibilities, to ensure co-ordination throughout. The problem before a town-planning body would be to zone for rebuilding on a new plan devised in such a form as to admit of gradual redevelopment; no easy task, especially when the personal idiosyncracies of the numerous owners come into the account, some conservative and some speculative. The important matter should be that the great mass of the public should hold a strong view in favour of the need of reorganisation, and without this it would be impossible to defeat those who imagined their interests were endangered by it. They must find a way of persuading the "big interests" to help to initiate the schemes, or otherwise the passive resistance to be overcome would make progress well-nigh impossible. In replanning built-up areas there were some assets that must be carefully guarded in the interests of sound provision for traffic needs. For example, the zoning for height should be subject to street widths and to the proportion of open to occupied areas.

Another important matter in replanning was that lines of route should not be laid down without a clear idea of the methods on which traffic was to be organised. Many of their difficulties at the present time were due to the fact that new streets had been directed to important centres, aggravating instead of relieving congestion. Apart from the possibilities of one-way and gyratory traffic, it was an axiom of the town-planner that multiple intersections should be avoided. A definite plan for the direction of traffic should invariably precede any action for the reconstitution of the road scheme and a thorough traffic census was necessarily antecedent to both. A town-planning scheme for a built-up area ought to be able, by the means he had mentioned, to secure an adequate road plan in exchange for concessions as to increased heights, with the exception of those areas where the proportionate heights were already excessive, in which case there was bound to be some expenditure in compensation. In larger cities a substantial alleviation of congestion might be effected by footways of the arcade type passing through a series of commercial blocks, and it was perhaps worth considering whether owners could be offered some form of encouragement to provide these on systematic lines, as even without any extraneous inducement a good deal had been done in this way.

Passing on to the industrial quarters, they found that little had been done in the grouping of outer-related industries. Had they progressed further in this direction, it might be worth while to consider whether these could not secure economical transport by continuous overhead travellers or telfer lines, running

from a goods yard over a series of works as a co-operative undertaking, and thus diminishing the more costly road traffic.

Mr. Lanchester then directed attention to a diagram he had drawn with the object of attempting a visualisation of the form a great city ought to take. He pointed out that in no case would the form he proposed to define come into actual existence, by reason of two facts, the one that every large city had to achieve its size by gradual growth, and the other being its peculiarities of location in respect to natural features. Nevertheless, it did seem worth while to try and formulate a scheme for the ideal disposition of its component parts. One was bound to assume that the central area would be occupied by the buildings for administration and recreation, hotels and large retail stores; the University and technical institutes would be best placed here, also, in which case it would be seen that the civic centre would not be a small, closely-packed group, but would occupy an area at least half-a-mile in diameter. Moreover, apart from this as merely a "spending" quarter, it would include provision for the concerns co-ordinating business activities, such as banks, exchanges, etc. Radiating from this there would be certain areas appropriate for industrial or commercial purposes, served by their transport routes, road, rail, or water, giving them an irregular star.

It would look as if the general housing would drop into the spaces between the points of this star, which was what would happen if no steps were taken to carry the citizens elsewhere, but with the acceleration of transit, they were enabled to take them out to the points of the star where they would be more or less in the position of a satellite village with open country on three sides. Locations of this character would be appropriate for the larger proportion of the population, but there would be a percentage having a claim to a more central position, and it was likely that one of their star-rays less suited to industry could be given over to a "west end" for those whose means enabled them to counteract the drawbacks of living in an urban area. In thus distributing the population, they must not overlook the problem of the family group, which might include workers of various types, employed perhaps in different industries or partially in industry and partially in the shops and offices of the central area.

Normally, the home would be at the point of that star-ray where the worker was employed, but the communications must be so organised that quick transit was available to other parts of the city. The positions of the radial routes could easily be conceived, and they would loop round a complete circuit suitably aligned near the outside of the central area, but it was probable that an outer circuit with a radius of something over a mile would be needed to complete the road system, as well as another much farther out still, connecting the village groups. If they visualised the pattern he had drawn they would see that there were voids between these two circuits which it required an effort to conceive as other than urban areas, but they must make the effort and try to imagine the city as a star rather than as a constantly swelling mass if they were to get on the right track. To begin with, the star form gave a certain latitude for expansion in the industrial sections without their having to fight their way into the residential. The intermediate spaces would also provide playing fields for the clubs and groups connected with the industries, and for goods marshalling yards and aerodromes. But they must regard them as being, to a large extent, non-urban areas, and try to dismiss from their minds the assumption that mere distance from a given centre determined the question whether an area shall be urban or otherwise.

He had ignored the idea of a ring belt which did not appear to him to afford a logical solution of the problem of a growing city, as it was sure to become an artificial line of demarcation, increasing the difficulty of adjusting the character zones and also the cost of transit. He, of course, assumed a good provision of open spaces, and should regard parkways connecting the village suburbs as desirable. In order to assist him in defining their objective, they might assume these suburbs as placed at a distance of some four miles from the centre, so that they would stand in a ring twenty-five miles in diameter. Allowing for each a population of 50,000, and a mile for their width, they could comfortably locate eight round this circle with a space of two miles between them; for a larger population than, say, half-a-million they would have to extend the distance. Having formulated their ideal, the next thing was to see how far it was possible to make their existing cities conform to it. Obviously this could only be done very gradually, but it must undoubtedly help them to have such an ideal in view when determining the trend of their operations.

Mr. H. H. Humphries (City Engineer of Birmingham) proposed a vote of thanks, and touched on many of the points raised in the papers. He disagreed with the suggestion that narrow streets were best for shopping in the present day, and pointed out that facilities for parking cars in a wide street were a valuable asset to the shopkeeper. He considered that Mr. Lanchester's plan would apply only to a new city planned on a model site.

Mr. F. C. Minshull (deputy town clerk of Birmingham) seconded the motion, which was carried.

SOCIETIES AND INSTITUTIONS

ROYAL INSTITUTE OF BRITISH ARCHITECTS.

The following announcements have been issued by the R.I.B.A. :—

Architectural Competitions : Assessors' Awards.

All architects who take part in architectural competitions are reminded by the Council of the R.I.B.A. that participation in a competition is a definite acceptance of the principle that the award of the assessor is final and binding upon themselves as well as upon the promoters, and that any competitor who feels that he has real ground for dissatisfaction with an assessor's award should communicate with the Secretary of the R.I.B.A.

Further, all architects, whether competitors or otherwise, are reminded that discussion or correspondence in the public or professional press which tends to criticism or disparagement of an assessor or award cannot alter the final and binding effect of that award, but may prejudice architects and the whole competition system in the opinion of the public, and is, therefore, highly undesirable.

The Conduct of Architectural Competitions.

The Council of the R.I.B.A. desire to remind all architects who may be appointed to act as assessors of architectural competitions that observance of the following points is vitally important for the satisfactory conduct of competitions :—

1. While the R.I.B.A. are prepared to advise the assessor if necessary on the general regulations governing the conduct of competitions, the assessor alone is responsible—

(*a*) For the drafting and presentation of any particular set of conditions and instructions and replies to competitors;

(*b*) That the General Regulations are not infringed therein.

2. Inasmuch as assessors' awards will necessarily be final and binding on all parties, assessors must refrain from premiating any design—however high its architectural merit may be in their opinion—which contravenes any of the conditions and replies which they have themselves drawn up for observance by competitors, and thus avoid any ground for legitimate criticism of their awards after publication.

3. Accordingly the value and importance of drafting conditions and replies to questions so as to leave the maximum latitude to competitors in the solution of the problem should not be overlooked.

London Street Architecture Medal, 1925.

Readers are reminded that the jury appointed to consider the above award will receive nomination forms up to February 27, and after that date will proceed to consider the award for the year ended December 31, 1925.

New Members.

At a general meeting of the Institute, held on Monday, February 15, the following members were elected :—

As Fellows; Allcock, Edward Thomas; Fread, Horace Charles; Gold, Hugh Andrew, M.C.; Goldsmith, Major George Hartley, M.C.; Hampson, Joseph Louis; Hughes, Thomas Harold, A.R.C.A., F.S.I., F.R.G.S.; Newnum, Eric George; Robertson, Alexander Robert; Scott, Eric Wilfrid Boning; Scott, Theodore Gilbert, M.C.; Tait, Thomas Smith; Taylor, Samuel Pointon; Tetley, Charles Reginald; Westwood, Percy James; Anderson, Arthur Ernest; Finlayson, William; Pritchett, Herbert Dewes; Cleland, John Stockwin, M.B.E.; Sudbury, Harry Tatham; Thraves, Alfred John.

As Associates: Ali, Syed Aziz; Alsop, George Hatherley; Barnes, Thomas Scott; Bhuta, Gopalji Mulji; Meikle, Edyth; Silcock, Frances Thelma.

As Hon. Fellow; Dicksee, Sir Frank, P.R.A.

As Hon. Associate; Griggs, Frederick Landseer Maur, A.R.A.

SURVEYORS' INSTITUTION.

International Federation of Surveyors.

At a Conference of Surveyors, representing leading professional societies in all the principal European countries, which was held in Paris in January, Mr. J. E. Drower, C.B.E., attended on behalf of the Surveyors' Institution, when it was decided to found an International Federation of Surveyors which would arrange for periodic conferences and for the circulation of scientific and other information of interest to the profession.

Monsieur Roupcinsky of Brussels was elected President, and Mr. J. E. Drower, C.B.E., Vice-President.

The London County Council (General Powers) Bill, 1926.

The Council of the Institution have had under consideration the provisions of this Bill, more particularly in connection with Part I, dealing with reinforced concrete construction, and Part IV, disused drains. In connection with some of these they see grounds for objection, and they have therefore thought it necessary to petition against the Bill. It is, however, hoped that it may be possible to arrange for the points against which criticism has mainly been directed to be amended before the Bill gets into Committee.

The Annual Dinner.

The annual dinner is to be held at 7.30 p.m. on Tuesday, March 9, at the Connaught Rooms, Great Queen-street, W.C.

INSTITUTION OF PUBLIC LIGHTING ENGINEERS.

At a recent meeting of the Council of this Institution, held at Birmingham, the programme of the annual meeting, which is to take place at Newcastle, on September 14, 15, and 16, was considered and approved.

Proposed Willett Memorial.

It is proposed to purchase, as a memorial to Willett, who conceived the idea of daylight saving, Petts Wood, near Chislehurst, at a cost of £12,000, and a further area of 45 acres adjoining at a cost of £5,000, these sums to be provided by voluntary contribution.

LEGAL SECTION

NOTES ON CURRENT CASES

Arbitration and Building Contracts.

IN the current number of the *Weekly Notes* (February 6), a case, Metropolitan Tunnel & Public Works Co., Ltd. *v.* London Electric Railway Co. is very shortly reported which we merely draw attention to. The plaintiffs, contractors, had tendered for a lump sum of £395,321 6s. 11d. for the execution of certain works relating to an extension of the defendants' railways, and under the contract entered into between the parties it was agreed that payment would be made once in every month as the work proceeded by way of advance, on the certificate of the engineer, "each such payment to amount to 90 per cent. of the value of the work actually executed," the remaining 10 per cent. to be treated as a retention fund, half of which would be paid over when the engineer certified that the works had been properly constructed, and the other half on his being satisfied that they had been duly maintained for three calendar months after completion. In the summary of the approximate bills of quantities the total amount of the bills and sundry items was £359,383, and the amount agreed for "general contingencies" one-tenth of that sum, making in all the lump sum agreed upon.

A question, however, arose between the parties as to the proper method of ascertaining the value of the works executed from time to time for the purposes of the payment clause, the plaintiffs contending that the value of the works executed ought to be ascertained by adding to the prices and rates set out in the bills of quantities a proportionate amount in each case of the sum referred to as "general contingencies." There was an arbitration clause in the contract providing that any question between the contractors and the employers, or between the contractors and the engineer in connection with the contract, or as to the construction of the contract, should be referred to the decision of an engineer to be agreed upon, and the submission should be deemed to be a submission within the Arbitration Act, 1889.

The plaintiffs had taken out an originating summons to have this question decided, but the defendants brought this motion to stay those proceedings under section 4 of the Arbitration Act, 1889, contending that the more convenient course was to refer the matter to an engineer under the arbitration clause to find the facts, and then if he should think fit he could state a special case.

The defendants contended that the question involved was not one of pure law but to a great extent one of fact, involving questions as to the practice and custom of the engineering industry, but the Court held that the sole question related to the construction of the contract and was purely one of law, and exercising the discretion vested in it, that it would be more convenient to ascertain any facts necessary for the purpose of determining the construction of the agreement in the present proceedings than to stay the proceedings in the summons in order to have the facts, which might never be in dispute, determined by an arbitrator. To what extent evidence when adduced would be admissible could not be determined at this stage on the motion.

The case at present only being reported in a short note, we cannot usefully comment upon it. Section 4 of the Arbitration Act provides that the Court may order a stay of proceedings "if satisfied that there is no sufficient reason why the matter should not be referred in accordance with the submission," and according to the present report it would appear that the reason was convenience. The Court quoted what appears to have been a dictum of Lord Parker in Bristol Corporation *v.* Aird (1913, A.C. 241; *The Builder*, March 28, 1913): "Everybody knows that with regard to the construction of an agreement it is absolutely useless to stay the action, because it will only come back to the Court on a case stated; therefore it is more convenient on a question of construction to allow the action to proceed. . . ."

In that case, however, the reason the action was not stayed was that there was a dispute of a substantial character between the contractor and the engineer, and the engineer would be a witness, and subject to cross-examination, a position incompatible with his functions as arbitrator under the arbitration clause. In the case under consideration in the first place no such consideration arose as there was no dispute with the engineer engaged on the works in any such sense, and even had there been he was not necessarily the person nominated as arbitrator, the submission being to an engineer to be agreed upon. Convenience and the avoidance of circuity of proceedings, therefore, appears to have been the ground upon which the order to stay the proceedings was withheld.

Fires during Removal of Furniture.

Now there are more houses available, and many people are removing their furniture either from one house to another, or from depositories, we think it may be useful to call attention to a question which has been the subject of two cases in the Law Courts in the past year, and which are reported in the same monthly part of the Law Reports. In both these cases the goods were destroyed or seriously damaged by fire in transit, and in both cases the cause of the fire was held to be due to the negligence of the carrier's servants; but the risk is an outcome of the modern methods of employing motor lorries, as in one of the cases the negligence was stated to be pouring petrol into the engine when it was hot, and although in the second case the act of negligence is not stated in the report, it may fairly be assumed to have been some act connected with the lorry.

The first of these cases is Turner *v.* Civil Service Supply Association (1926, 1 K.B. 51), in which the defendants had contracted to remove household goods and furniture from Battersea Park to Hailsham, Sussex, and in the contract, amongst other clauses, was one which provided: "The contractors are not responsible for loss or damage by fire . . . aircraft or bombardment to property in transit, in storage or in process of being packed; but will effect insurance on behalf of the customer on receipt of written instruction from the customer." In this case the fire occurred in transit from the cause stated above, filling in petrol while the engine was hot.

It was contended by the plaintiff that this clause did not cover fire caused by the negligence of the defendants' servants. In the course of the judgment the Court considered the law relating to common carriers and those who are not common carriers, in which latter class were the defendants. A common carrier is an insurer —that is to say, he is responsible for the safety of the goods entrusted to him in every case unless the injury is occasioned by what is termed the act of God or the King's enemies. He can, however, contract himself out of that liability if he does so in express and unambiguous terms. A person who is not a common carrier is responsible for the negligence of his servants, but he, in his turn, can contract himself out of that liability. The contractors in this case not being common carriers and not being liable for accidental fire, the Court held that to give effect to the exception "the contractors shall not be responsible for loss or damage by fire," the clause must clearly apply to fire caused by the negligence of their servants, the only cause of loss for which they were liable.

In the second case, Fagan *v.* Green & Edwards, Ltd. (1926, 1 K.B. 102), tried about six months later, the goods were damaged or destroyed by fire due to the negligence of the defendants' servants whilst in transit from London to Oxford under a contract which provided that the company would not be responsible for fire, but would insure if requested to do so, the charges being placed to the account of the depositor; and the Court followed and approved the decision in Turner *v.* Civil Service Supply Association. We draw attention to the above cases for the reason we have stated above, that many people may not realise that the modern form of transport has introduced a special risk from fire which should be guarded against either by very express terms in the contract or by insurance.

Rights of Way: A Conveyancing Point.

When purchasing real property one of the questions of the first importance is the means of access enjoyed with that property to and from the highway, but the recent case, Gregg *v.* Richards (1926, 1 Ch. 102) shows the care that must be taken in connection with the conveyance. The defendant in this action was the owner of five houses fronting on Gower-street, Willenhall, Stafford, numbered 12 to 16. At the side of No. 12 there was a yard, entry to which could be obtained from Gower-street through either double gates or by a gateway for foot passengers. This yard extended behind Nos. 12 to 15 up to No. 16, which projected further back from Gower-street than those houses, and the occupiers of Nos. 12 to 16 had enjoyed the privilege or quasi easement of access to the backs of the houses through the double gates over the way leading through the yard for vehicles, and there was a single gate as well for persons on foot, but there was no defined roadway. At the time of the conveyance the yard was in the ownership of the defendant.

On May 4, 1923, the defendant conveyed No. 16 to the plaintiff in fee simple, and in the "premises" or parcels of the deed of conveyance it was stated the property was conveyed "together with the right for the owners and occupiers for the time being of the property hereby conveyed to use jointly with all other persons for the time being entitled to use the same the road or way at the back of the buildings Nos. 12 to 15 Gower-street aforesaid, and the way or passage leading into Gower-street, and coloured green on the plan endorsed on these presents such owners or occupiers paying a proportionate part of the expense of keeping the said way or passage in repair."

The portion coloured green was only the 4 ft. footway from the single gate.

The "habendum" in the deed stated that the premises were conveyed to the plaintiff "to hold the same subject to, and with the benefit of, all easements and privileges in the nature of easements as are now subsisting in respect of the property hereby conveyed and the said adjoining property of the vendor."

On March 20 the defendant had sold to other purchasers, also defendants in the action, Nos. 12 to 15, with the yard and the way leading to the yard from Gower-street, and the defendants contended that the plaintiff had only right of access over the footway coloured green and erected a fence to prevent access of vehicles.

The plaintiff was claiming a declaration that she was entitled to a right of access for vehicles and, alternatively, rectification of the indenture.

On the construction of the conveyance the Court held that the plan and the parcels must be read together, and that the grant was the grant of one way, the footway, though described in two sections, first as the road or way at the back of Nos. 12 to 15, and then the way or passage leading into Gower-street. The Court also observed that to construe it as the plaintiff contended as two separate grants of a carriage-way and a footway was open to another objection that it cast upon her liability only

to repair the footway. It had been further contended that under the "habendum" the quasi easement was conferred, but the Court, on the old authority of Sheppard's "Touchstone," held that if the thing granted is not named in the premises to the deed it will not pass though named in the habendum, though if the matter in question is only appurtenant to that which is granted and is referred to in the habendum it will pass.

Further, section 6 subsection (2) of the Conveyancing Act was relied upon, which provides that a conveyance of land with houses or other buildings thereon shall be deemed to include and convey with the land all liberties, privileges, rights and advantages reputed to appertain to the land, or houses, or buildings, or at the time of the conveyance enjoyed therewith, and in view of the finding of fact in the plaintiff's favour as to the privilege enjoyed at the time of the conveyance the Court intimated she would come within this subsection, but subsection (4) prevented this subsection from applying as it is only to apply if and so far as a contrary intention is not expressed in the conveyance, and the Court held in this conveyance there was a contrary intention expressed by the express grant of a right of way over only 4 ft. of the roadway, and the maxim *Expressio unius est exclusio alterius* applied, and although it was argued that the habendum showed an intention that the quasi easements were to be enjoyed by the plaintiff, the Court held that the habendum showed that the parties contemplated that the quasi easements should be enjoyed by virtue of the conveyance and not by the statutory operation of section 6.

We admit that even the brief note of this case is enough to make the layman's flesh creep, and we should apologise for troubling him with it were it not for the fact that the case appears to convey one lesson easy to be learnt: Make certain that anything you wish conveyed to you, including all privileges and rights, is clearly expressed in the premises or parcels of the deed, and leave nothing to chance ni the habendum.

LAW REPORT

Claim by Tiling and Roofing Contractors.

In the Southwark County Court, before Judge Sir Thomas Granger, Messrs. Roberts Adlard & Co., roofing and tiling contractors, of 47, Queen Elizabeth-street, Bermondsey, S.E., sued Miss Allen, of 237, Lordship-lane, Wood Green, N., and Messrs. Berry & Blake, builders, of Park-road, Chiswick, W., to recover £83 5s. for work done and material supplied. Mr. J. P. Eddy and Mr. Harley appeared as counsel for the plaintiffs; Mr. Worthing and Mr. Cresswell, counsel for Miss Allen; and Mr. Beasley, barrister, appeared for the second defendants, Messrs. Berry & Blake.

Mr. Eddy, in opening the case, said that some time in April, 1924, the first defendant (Miss Allen) entered into a contract with Messrs. Berry & Blake to build a house at 237, Lordship-lane, Wood Green. Mr. Meredith was appointed architect by Miss Allen in connection with this contract, and the plaintiffs were asked to tile this house, and this work was carried out. There was no question about how the work was done or as to the amount charged; it was merely a question as to which one of the defendants was liable.

Mr. George Frederick Alford, a partner in the plaintiff firm, gave evidence and agreed that this work was carried out, and there had been no complaint. Inquiries were made of the architect who had been appointed. (Mr Meredith), who guaranteed the payment of the money on Miss Allen's behalf.

Mr. Edward Meredith, A.R.I.B.A., of Goodmayes-road, Essex, agreed that he was appointed architect in connection with this house. He would not deny that he guaranteed the payment of the money. Under the contract, he was of opinion that he had authority to guarantee the plaintiffs their money, although he did not ask Miss Allen especially, as he did it on his own initiative. He issued certificates periodically for £100, which Miss Allen paid to Berry & Blake. This closed the case for the plaintiffs.

Miss Allen then went into the box, and denied that she ever gave any authority to Mr. Meredith to guarantee the money. She agreed that she was the defendant in an action brought in the High Court by Berry & Blake to recover £150, but she successfully defended this and recovered judgment for £5 in a counterclaim which she filed. The making of the roof of the house was in the contract, but she was of opinion that she should pay Berry & Blake and not the sub-contractors direct.

Mr. Frank Berry, partner in Messrs. Berry & Blake, gave evidence for the second defendants, and said that provision had been made in his bill to Miss Allen for the payment of the plaintiffs' account, so that she could pay them direct.

Judge Sir Thomas Granger, in giving his judgment, said he had to decide whether one or both of the defendants were liable. It seemed perfectly clear to him in this case that the defendant Allen was liable to the plaintiffs for this amount. The second defendant was liable as well. He therefore gave judgment against both defendants, with costs.

Judgment was accordingly entered for the plaintiffs for the amount claimed.

SPECIFICATIONS.—VII

By H. V. MILNES EMERSON, A.R.I.B.A.

THATCHER.

Thatch can be laid with wheat, rye, or oaten straw, reeds, and heather. For pavilions, &c., heather makes a good finish, but should have a reed or straw thatch under same. The thatch is from 12 in. to 16 in. thick, and is secured to oak laths with tarred twine and bands, or runners are formed with ash or hazel hetherings split in half and pinned down with buckles (roughly, a wooden hairpin). The least pitch should be 45 deg. Stacks should be carried well above the roof.

Item

157. THATCHING.—The roof, dormers, &c., to be covered with wheaten straw .. in. thick laid in short bundles, the end straws only showing, carefully formed round hips, ridges, valleys, &c., and sewed on with tarred twine to 1½ in. by ½ in. oak laths spiked to rafters. The eaves and gable ends to be neatly clipped off and dressed up.

The runners or bands to be formed with twine straw spiked to thatch with hazel spikes, the ends to be left showing or to be formed with split hazel sticks ("hetherings"), fixed with buckles with plain bands or interlaced, as shown.

CARPENTER AND JOINER.

NOTES.—Timber used in this country for building purposes is obtained from trees known by botanists as "Exogens." The trunk or stem of the tree grows by the deposit of successive layers on the wood next to the bark, whilst at the same time the latter becomes thicker by the deposit of layers on its under side.

If we examine the cross-section of this class of tree we find that the trunk is made up of concentric rings, each ring generally consisting of two parts, the outer being as a rule darker in colour, and more dense or solid than the inner part. These layers are termed the annual rings, owing to one of the rings being generally formed each year. The centre of the tree consists of a column of pith, around which are the annular rings composed of bundles of cellular tubes, which convey the required nourishment to the leaves from the earth. Radiating from the centre towards the bark, and also from the bark towards the centre, are planes consisting of hard, thin sheets of wood known as medullary rays, which serve to convey the sap from the outer to the inner part of the tree. These medullary rays are in some trees strongly marked, and when cut obliquely produce a beautiful figured appearance. Many kinds of oak are enriched with this figuration.

These rays are comparatively short and do not extend in one length from end to end of the trunk, neither do they extend from the centre to the bark in one piece; thus they serve their purpose without weakening the timber. During the autumn the medullary rays convey the thick descending sap to the inner rings where it is absorbed by the cells, assisting the rings to harden and to become more durable. With normal growth one ring is added yearly to the tree, the light portion being formed when the sap is rising, and the dark portion formed when the sap is descending. By means of these rings the age of the tree can be ascertained with comparative accuracy. With the growth of the tree the inner layers are filled up and hardened, becoming what is known as heartwood, and the outer part of the tree, which is softer and lighter in colour than the heartwood, is called the sapwood, and can generally be distinguished from the heartwood. The central portion of the tree not only becomes hard with the drying up of the sap, but is compressed by the bark. Each layer solidifies and expands, exerting a pressure upon the bark, which eventually cracks, but the resistance to this action has in the meantime compressed the tree throughout its bulk.

The heartwood is stronger and more durable than the sapwood and should be used for all good-class work.

The best season for felling timber is when the sap is at rest; in temperate climates this occurs in midsummer and midwinter. The timber should be felled when the tree is in its prime. The ages of trees when they should be felled is given by Tredgold as follows:—

Oak: 60 to 200 years; 100 years the best.
Ash, larch, and elm: from 50 to 100 years.
Spruce and Scotch fir: from 70 to 100 years.

Larch is the quickest variety of home-grown timber used in structural work, requiring about 60 years to reach maturity. It is the most durable of our native softwoods.

Defects in timber are due to the nature of the soil upon which it was grown, and damage caused to the tree during growth. These defects generally take the form of shakes or splits, also the twisting of fibres caused by the action of a prevailing wind. Heartshakes are common in nearly every variety of timber. In some cases the splits are hardly discernible, in others they divide the tree into segments. Where the splits not only traverse the length of the tree but also twist in their course the tree is practically useless as it is impossible to convert the timber into small scantlings or planks.

When one ring is separated from another ring the split is called a cupshake and no great harm is done if they are of small size.

Incipient decay is denoted by a yellow or red tinge, which indicates that the tree had passed its prime when it was felled.

When a branch has been broken off a swelling is often caused by the growth of layers over the wound, causing what are known as rind galls. A tree that has had its fibres twisted during growth is unsuitable for squaring, as so many fibres would be cut through.

After felling, the tree is cut into sizes suitable for use, and the following are the market forms more generally used in constructional work:—

Balk: A log hewn or sawn square.

Planks: Rectangular shape, 11 in. broad, 2 in. to 6 in. thick, and from 8 to 21 ft. long.

Deals: Similar shape, but 9 in. broad and not exceeding 4 in. thick.

Battens: Similar to deals, but only 7 in. wide.

Good timber should be from the heart of a sound tree, perfectly free from sap, straight in fibre free from large, loose, or dead knots, flaws, shakes or blemishes of any kind. The surface should not be woolly but should be firm and bright with a silky lustre when planed, whilst the annual rings should be regular in form, close and narrow. The latter are generally signs of strength, but when the rings are open or porous the wood is weak and liable to decay. The colour should be uniform throughout; when it is blotchy, blue or pale it can generally be assumed to be decayed.

Great care should be used in selecting timber. Owing to the post-war demand all classes and conditions have been imported into the country, much of it diseased or contaminated with the spores of dry rot. An architect or builder should make a point of seeing the timber where it is stacked, and should only use such timber if he is satisfied that it is not only sound but has not been in contact with diseased timber. Further, due precautions should be taken to obtain proper ventilation to all timber in new buildings in order to prevent the growth of any spores of the dry-rot, should they be present.

Dry rot in timber is produced by a fungus called Merulius lachrymans, which feeds upon the chemical constituents of the wood. In the course of its life it travels and thrives whilst conditions are suitable, leaving behind a material rendered useless and brittle through the extraction of its life blood, as it were. The disease is propagated by means of spores, which take the form of fine brown dust, which can be conveyed in many ways—by the workman's clothes, tools, etc., or by floating through the air. Being very tenacious of life the spores will, if kept dry, lie dormant for months, and will germinate under favourable conditions. Thus it is possible for the spores of some diseased timber, cut, say, on the Baltic, obtaining a lodgment upon surrounding timber brought over to this country, and months after, under suitable conditions, to germinate and spread.

Whilst timber is kept dry and in the open it is safe from attack, but if it is placed in a damp or damp and dry atmosphere, with a moderate temperature, and the absence of fresh air and light, dry rot will develop if the spores are present. The spores can thrive in a temperature up to 80 deg. Fahr. and down to and even below freezing point. Darkness is inseparable under the ground floor, behind skirtings, etc., but provided the building is dry and proper ventilation is provided dry rot will not develop even if the spores are present. Dry rot usually commences in sapwood, which is more liable to decay than heartwood.

Timber should be thoroughly seasoned before being used. The object of seasoning is to expel or dry up the sap remaining in the timber which otherwise putrifies and decays.

Natural seasoning is the cheapest and most efficient method of seasoning timber. The timber is stacked so that the air can circulate around each piece, under permanent sheds, or a temporary roof is provided as a protection against rain and sun.

Water seasoning is carried out by immersing the timber under water as soon as it is cut, when a large amount of the sap is washed out. The timber should be stacked and well dried before being used. Timber that has been seasoned in salt water should not be used on buildings owing to its tendency to attract moisture.

Kiln drying is effected by placing the timber in a kiln or chamber and subjecting it to a current of hot air, which dries up the sap. Joinery work, floor boards, etc., should be further seasoned after being worked, and should be left as long as possible before the final assembling and fixing.

The timber used for building purposes can be divided into two classes:—

Soft wood, including pines, firs, and all cone-bearing trees.

Hard wood, including oak, elm, mahogany, teak, beech, ash, etc.

Northern pine, known as "red or yellow fir or deal," or "spruce," is grown in Scotland and also in the Baltic and Russia.

In the best timber the annual rings are thin, the wood is hard and dry to the touch, and does not have a woolly surface from the saw.

The inferior variety has thick annual rings, the wood is heavy, filled with resinous matter, chokes the saw, and feels clammy. It is not durable, and will not bear strains.

The best of this Northern pine is grown on the Baltic, and is known as red deal and yellow deal. When cut from the spruce it is known as white deal.

White fir, or spruce, generally known in this country as white deal, is grown here and also in Norway and North America. Although the timber is tough it is light, elastic, easily worked, fairly fine-grained, but, being soft and knotty, is not so good as the red and yellow deal, and is used for the coarser grades of joinery, cheap flooring boards, etc.

From America we get the red and yellow pine, but these are not used to a great extent on building. Pitch pine, which comes from the Southern States, is a wood which has a reddish white or brown colour, wide annual rings which, being strongly marked, produce a beautiful figure when the wood is wrought and varnished. The timber is very durable, being full of resinous matter; it is heavy, hard and strong, free from knots. The proportion of sapwood is large and will soon rot in a moist atmosphere. Owing to the large amount of resin it will not take paint well.

The Oregon pine is found in N.W. America and resembles the American red pine, but is somewhat harder. It is used more in Australia than this country, the cost of transport being less.

The chief of the hardwoods used in this country is the oak, of which several varieties are to be found in this and other countries. British oak, when in sound condition, has a light brown colour, with a hard, firm glossy surface, whilst the medullary rays are hard and compact, producing the beautiful silver grain when the timber is cut obliquely.

Sound oak is very durable in earth and water; that used in the foundations of Winchester Cathedral was found in good condition after being in position for 1,000 years. The timber is very strong, hard, tough, very elastic and not easily splintered. It contains gallic acid, which, although making it more durable, will corrode iron fittings and fastenings.

Imported oak includes American, Austrian, Danzic, and Japanese. Although not considered so durable as the British oak, much of it is used in floors, wainscot and furniture on account of its being highly figured.

Elm is generally used for weather boarding, and is often cut with one wavy edge, thus giving an irregular and effective appearance to the structure. It is very durable if kept constantly wet or dry, but will not last with alternations of wet and dry. The tree flourishes in this country, and in France and Spain. The colour of the sapwood is yellowish, and the heartwood reddish brown. The sapwood withstands decay as well as the heartwood. The fibres are very twisted, which makes the wood strong across the grain. It will also offer great resistance to crushing.

Of the imported hardwoods those in most common use are mahogany and teak. Mahogany comes chiefly from Central America, and is generally known as "Honduras," whilst that from the West Indies is known as "Spanish mahogany" or "Cuba." It is practically an indoor wood, being unsuitable for external work. The Honduras mahogany is of a golden or red-brown colour, often much veined and mottled. It contains a resinous oil which repels insect attack, and contains no acids injurious to metal fittings or fastenings. When fresh the wood is strong, tough, and flexible, but becomes brittle when dry. The Spanish or Cuba mahogany, which comes from the island of Cuba, has a beautiful wavy grain and figure capable of taking a high polish, and is sound and free from shakes. Mahogany requires much care in seasoning, and it does not warp or shrink much, but if the seasoning is hurried it is liable to split externally.

Teak is an eastern wood and is found in Burmah, Southern India, Peru, Siam, and Java. It somewhat resembles English oak, has a fine straight grain, but no visible medullary rays, and the texture, although porous, is uniform. It contains a resinous aromatic oil, which makes it very durable, and also protects it against insects, including the white ant. This oil is a preservative against rust, and for that reason preserves iron fittings. Teak is used largely in shipbuilding and in first-class joinery work, but its use is restricted on account of its higher cost compared with oak. With the advance made in veneering many beautiful woods are now coming upon the market from India, Australia, Africa, and other of our Colonies, which previously could not be used owing to cost, and the tendency to warp and shake when used in thicker sections. It is intended to deal more extensively with these and other timbers in future articles, together with further information upon the timbers already dealt with in these notes.

INTERNATIONAL HOUSING AND TOWN-PLANNING CONFERENCE

The International Conference on Housing and Town Planning will be held at Vienna in September this year, under the auspices of the Mayor and Council of the City of Vienna. It has been arranged by the International Federation for Town and Country Planning and Garden Cities. The President is Mr. Ebenezer Howard, and the Vice-Presidents are Sir John Sulman, K.B.E., Australia; Stadtrat Anton Weber, Austria; Senator Vinck, Belgium; Dr. F. L. Prochazka, Czecho-Slovakia; J. C. Jensen, M.P., Denmark; Saleh Enan Pasha, Egypt; Professor Eliel Saarinen, Finland; Louis Bonnier, France; Dr. R. Schmidt, Germany; Viscount Astor, Great Britain; Dr. H. P. Berlage, Holland; Ch. Gierloff, Norway; Salvador Crespo, Spain; Baron Palmstierna, Sweden; F. A. Delano, United States.

The principal subjects for discussion will be:—

(*a*) Examination of the conditions of land tenure in each country and of how far they permit practical results respecting town and regional planning.

(*b*) The rational distribution of cottage and tenement houses.

The list of papers and special reports on these subjects will be announced later. They will be sent to delegates before the conference.

Vienna is itself of much interest from the point of view of town planning and housing. It is the centre of an important region and has the status not only of a city but of a state of the Austrian Republic. The city has had a zoning plan since 1893, and a general plan since 1894. It has its large belt of forest and meadow amounting in all to 11,000 acres. A new town-planning scheme is being prepared for the large town area on the left bank of the Danube.

During the difficult after-war conditions the city council were responsible for building over 3,500 houses between 1919 and 1923. A five-year programme of building was started in the autumn of 1923 to provide 25,000 dwellings. So far the actual building is ahead of the schedule, for 6,700 dwellings were built in 1924 and 8,800 in 1925. The greatest part of the programme will be completed by the end of 1926. The one-family house for the poorer classes was unknown before the war, but of the above dwellings built since then 3,000 are of the cottage type.

At the same time as the conference there will be held an exhibition dealing with the subjects to be discussed at the conference.

The full programme will be issued later, together with particulars of the facilities offered to delegates.

THE "BUILDER" CONSTRUCTIONAL PROBLEM COMPETITION

THIS Competition is limited to students in architecture and building classes or schools, assistants who have not passed the Final of the R.I.B.A., and others engaged in architecture or building not over 25 years of age. A prize of £1 will be awarded each week.

Drawings should be on half imperial sheets of paper or tracings, and should be in ink with bold lines and printing, for reproduction, when, necessarily, the drawings are much reduced.

Answers, addressed to the Editor and marked "Problem 8," to be sent in not later than first post, March 8. The Editor's decision to be final.

Competitors who wish to have their drawings, &c., returned should enclose a stamped, addressed label.

AWARD FOR PROBLEM 5.

Mr. S. D. Bowman, whose drawing is reproduced, has been awarded the prize of £1 for the best solution to Problem No. 5. This is the second occasion he has been awarded this prize, but in the Problems he has competed for his work has been consistent. Much can be gained by closely examining his method of drawing and spacing on the sheet. The only point that does not appear to be quite sound is the joint to the flap. It involves special working to the edge of the flooring, and, theoretically, the absence of any space at the joint prevents water getting away. Apart from that, the solution is sound and well thought out.

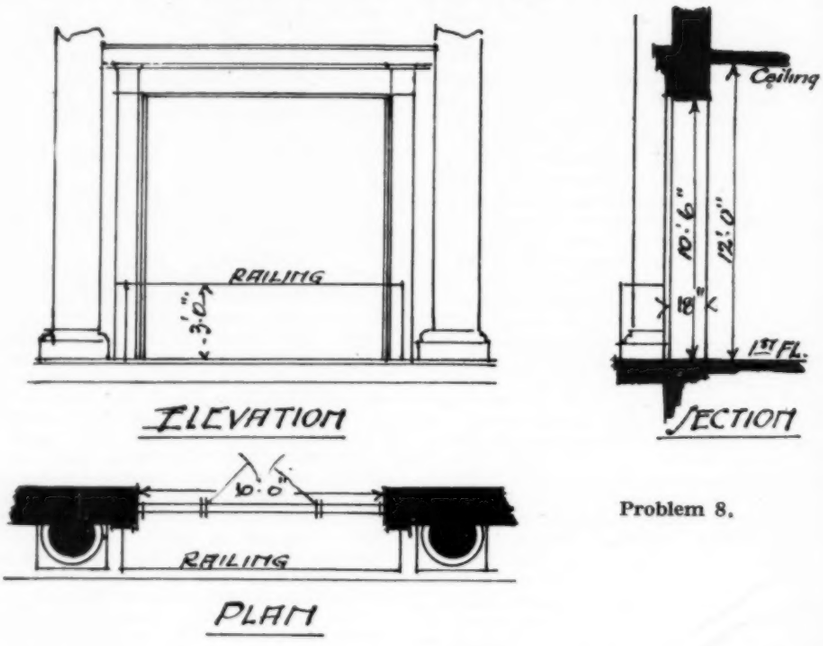
Mr. R. Hudson submits a bold drawing, and has adopted the method of fixing his crane to a specially prepared oak joint firmly secured to the wall with straps. The crane is simple and easily worked, whilst the total projection of the flap is 1 ft. 10 in. from the wall face.

Mr. R. A. Ronchetti sends in a fair drawing, but has made a few errors. The brickwork is shown in detail, which is unnecessary and involves a large amount of time and trouble. It is also wrong, as he has put the closures in various positions. (Look up "English bond.") His bracing of the doors is not correct, and the fanlight could be better. Fixed triangular supports under the flap have been provided, but the hinge to the flap is not correct. On the whole, the result is promising.

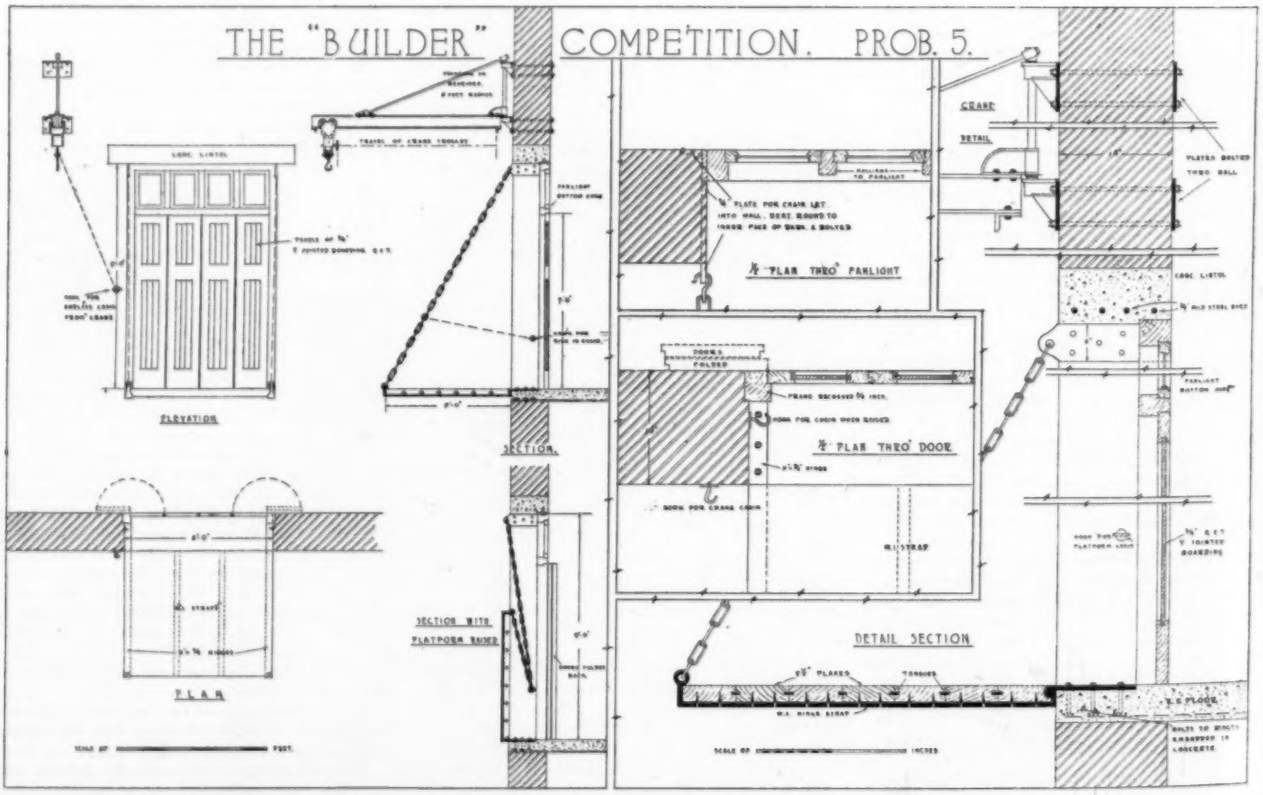
Mr. R. E. Bowker sends quite a good drawing, but his main mistake is the platform. This is formed with 4 in. by 3 in. framing covered with inch boarding without any straps, and projecting 7 ft. The flap, as shown, is too weak, and the projection is not often required beyond 5 ft. The cover shown for protecting the flap when up is unnecessary.

Problem 8.

The first floor of a block of business premises in a main street is to have windows from the floor level to the height shown in sketch, with doors to give access to balconies. The façade is in stone, and the window should be of metal, with metal railing outside. Draw plan, elevation, and section to a scale of 2 ft. to 1 in., with large size details through the frame head, mullion, transom, &c. Show how the frame is fixed, method of glazing sashes, &c., which should be in plate glass.



Problem 8.



Winning Design, Problem 5. BY MR. S. D. BOWMAN.

ARCHITECTS' & BUILDERS' INQUIRY BUREAU

We are glad to give questions and answers, but cannot accept responsibility for contributed replies, especially on legal matters.

May we appeal to our correspondents to submit their queries on paper of a size easily filed, and written as legibly as possible, or, better still, in typewriting?—ED.

Making Walls Soundproof.

[REPLY TO MR. F. PALMER, FEBRUARY 19.]

SIR,—Building a slab wall, 2 in. thick, and with a small cavity between it and the party wall, is quite a sound method of checking sound transmission. It will, however, be still further improved by packing the cavity loosely with slag wool. This material has the advantage of not being liable to decomposition, and will not harbour vermin. It is generally found that a 9 in. party wall is—shall we say?—conversation-proof, which is generally as much as the tenant of a semi-detached house is entitled to expect. The mere fact that houses are built semi-detached or attached is for reasons of economy, and undue work upon the party wall does much to cancel the saving. It is probable that a 11 in. cavity wall would tend to check transmission of sound, but in hardly sufficient degree to warrant the expense of plumbing both faces of the wall, the provision of wall ties, &c.

SUFFICIENT.

Damp Walls.

[REPLY TO MR. RICHARD ROSTRON, FEBRUARY 12.]

SIR,—Although it is quite possible to form a damp-resisting surface to an old wall, it is practically impossible to resist the pressure of water that will drive through a cellar wall which has not been properly damp-proofed in the original construction, except by further constructional work. To effect this it would be necessary to render the walls with asphalt in two layers and then apply to the face of same a further 4½ in. of brickwork to give the necessary resistance to pressure. In a similar way the floor should be lined with asphalt and a layer of concrete 4 in. thick laid on the top of same, since pressure of water is likely to drive up as well as laterally. Any less drastic measures are almost foredoomed to failure.

THOROUGH.

[A further reply to this query has been posted to our correspondent direct.]

Efflorescence in Concrete.

[REPLY TO "J. B. D.," FEBRUARY 19.]

SIR,—I rather question whether it is not condensation rather than efflorescence that is the root of the trouble, which, presumably, occurs on the inside face of the concrete dressings. This is a common complaint where blocks of concrete, impermeable throughout, show through the entire thickness of a wall. It is due to a moisture-laden atmosphere condensing on to a cold surface which is of a nature that cannot cope with the deposit by condensation. The only remedy when the place is built is to give a good thick coat of lime plaster upon the inner face. For new work it is advisable to form the inner half of the blocks in concrete that has a proportion of breeze in the aggregate.

POROUS.

[This question has also been answered by post.]

Damp Wall.

SIR,—Some considerable time ago the water from the roof of a shed adjoining my house ran into one of the outside walls of the house through the faulty guttering of the shed, and, consequently, before the owner could adjust the guttering, the dampness had shown through the wall and spoilt the wall paper. I am told that the dampness will take some considerable time to dry and that I shall not be able to have the wall re-papered until it is dry.

I have been informed that there is a liquid (patented in 1908 by a Mr. Simpson) which, if painted over the dampness, will take it out. Could you tell me if there is such a liquid on the market, if it is effective, and where obtainable?

C. BAKER.

Girders Cased in Concrete.

[REPLY TO "QUESTION," FEBRUARY 19.]

SIR,—The extra strength obtained by a concrete casing to a heavy joist used as a bressemer to carry a wall is seldom, if ever, considered in building practice. It might be 5 or 10 per cent. increase on the tabulated safe load, but it would be an unwise economy to rely on this. In the case, however, of R.S.J.'s in fire-resisting floors, the increase of strength of the joists in a proper design is from 25 to 40 per cent. The L.C.C. at the present time ignores this increase. In London the requirements for the construction of "skeleton framework" buildings and the protection of steelwork therein are set out in the L.C.C. General Powers Act, 1909. Further information and formulæ on concrete casings and floor construction will be found in the handbooks issued by well-known steel construction firms.

F. J. FORSTER, A.R.I.B.A., A.I.Struct.E.

Warping of Veneered Floor.

SIR,—I have recently laid down a veneered oak floor on an old deal floor. The old floor has been in existence for at least twenty years and is of 9 in. by 1 in. boarding with metal tongued and riveted heading joints. The house has an old and quite efficient heating apparatus. Before laying parquet floor, all old nails were punched in and the surface thoroughly traversed. The veneer was of the finest quality, well-seasoned wainscot oak, three thicknesses cut out of 1 in. board. It was well bradded and glued down with special glue. It is now six months since the floor was laid and the underflooring has warped to such an extent that the whole surface is corrugated. Where the veneer is laid in the same direction as the floor the former has split. It would not appear that the heating pipes below the floor have any relation to the degree of warping above. The defects take place equally over open joisted basement and a 2 ft. ventilated space. There has been no difference in the degree of humidity.

Can you give me any information as to:—1, Cause; 2, cure.

C. H. PERKINS.

Steel-framed Houses.

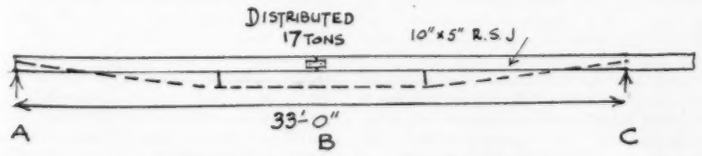
SIR,—What would be the safe minimum thickness of concrete to protect the steelwork in the external walls of houses, and of what proportions should the concrete be made in order to be most effective against corrosion? Would it be advisable to treat the floor-bearing girders in a similar way, or would not some bituminous compound be just as efficacious?

BEGINNER.

Conversion of R.S.J. to Trussed Girder.

SIR,—It is proposed to remove the 4 in. cast-iron column at point B and convert the entire span from points A and B into a trussed girder. A 1½ in. diameter steel rod will be sufficient to take up the tensile stress 1 ft. 2 in. below the lower flange of the girder. Would a reader, who has had experience, or who is interested, kindly suggest the method of efficiently connecting the tension rod to a point 2 in. below the upper flange of the girder? The shear is about 13 tons on the connections A and C.

S. J. K.



CONVERSION OF R.S.J. TO TRUSSED GIRDER.

THE WEEK IN PARLIAMENT

WESTMINSTER, *Wednesday.*

Thames Bridges.

Mr. Scurr asked the Minister of Transport whether the London Traffic Committee had made any recommendation concerning the proposed St. Paul's Bridge over the Thames, and, if so, whether he proposed to accept their suggestion?

Colonel Ashley said that the answer to the first part of the question was in the negative. The second part did not therefore arise.

Mr. Scurr asked the Minister of Transport whether he was aware that the bridge committee of the Corporation of the City of London had considerable funds in its possession which could only be used for building and maintaining bridges which touched the boundary of the City; and whether, in view of the necessity for bridges over the Thames not touching the City boundary, he would consider the question of promoting legislation for making these funds available for building bridges in other parts of London?

Colonel Ashley said he was not sure that Mr. Scurr had correctly described the restrictions imposed upon the Bridge House Estates Committee, but he did not propose to promote legislation on the subject.

Mr. Scurr further asked whether the London Traffic Committee had taken into consideration the question of a bridge at Charing Cross for vehicular and pedestrian traffic; and, if so, what recommendations had been made?

Colonel Ashley said he understood that the London Traffic Advisory Committee had been and were giving consideration to the question of the Thames Bridges generally. Up to the present the Committee had made no recommendations to him on the matter.

Imported Bricks.

Sir P. Cunliffe Lister informed Col. Woodcock that the number of bricks imported into Great Britain and Northern Ireland registered as consigned from foreign countries amounted to 7,372,000 in 1923, to 85,015,000 in 1924, and to 159,002,000 in 1925.

Empty Houses.

Mr. T. Thomson asked the Minister of Health if he was aware that there were still a number of empty houses withheld from occupation in overcrowded areas; and would he reconsider the desirability of taking further steps to secure the use of such houses.

Mr. N. Chamberlain said he was aware that there was always a certain number of unoccupied houses which were held for sale. Local authorities already had power to purchase or lease houses suitable for the working-classes, and he did not consider that it would be practicable to promote further legislation on the subject.

Sale of Works of Art.

Sir Henry Slesser asked leave to introduce a Bill to prohibit the export from the United Kingdom of certain works of art and ancient or historic buildings and monuments. He said that the necessity for a Bill of this kind had increased very largely in recent times, because the tendency to buy works of art and buildings had become accentuated. He agreed it was a matter of great difficulty and required great consideration and the advice of experts, and he suggested that, if the Bill were read a second time, it should be referred to a select committee of experts who, having studied the whole question, would recommend to the House the form which the measure should take.

Mr. Rye (a Unionist Member), opposed the Bill, which, he said, would interfere with the liberty of the subject and the liberty of owners to do as they liked with their own possessions.

Leave to introduce the Bill was granted by a majority of 51, and the Bill was brought in and read a first time.

THE BUILDING TRADE

INDUSTRIAL STATISTICS, 1925

IN the early part of a new year we have usually taken a survey of industrial conditions in the past year as disclosed by the statistics published in the *Ministry of Labour Gazette*, which furnish the nearest approach to "hard facts" attainable in reference to industrial conditions, and we once again have to begin on the prevailing note

Unemployment.

Taken as a whole, the year was a trifle worse as regards employment than 1924, the average of the monthly percentages of unemployment among workpeople covered by the Unemployment Insurance Acts being 11.3 as compared with 10.3. These figures should, however, be read in conjunction with the observations contained in the "Analysis of the Course of Unemployment from July, 1923, to October, 1925," published in the *Labour Gazette*, December, 1925. There it is observed that the gross figures of unemployment in all insured industries do not disclose the widely varying courses taken by great sections of industry and an instance is given that a wide extension of unemployment in the coal mining industry turned what would have been a rapid decrease in the gross figures between January and June, 1925, into an eventual increase. Again, too narrow or limited a period may also give a wrong impression owing to seasonal variations in particular trades. At the end of December, 1924, the number of workpeople registered as unemployed was 1,319,000, whilst at the end of last December the number was 1,166,000. There is a note in the *Gazette* which is of some importance, as when any reduction is shown in the figures of workpeople it is the fashion in some quarters to belittle any reduction by asserting that it is due not to better employment but to legislative or administrative changes which have lessened the number of persons registering for unemployment benefit. The *Gazette* states that although probably these changes have had some effect in reducing the numbers, the reduction due to this cause is not considerable.

In a recent article in *The Times* on Unemployment in Germany it was stated that a Bill for compulsory unemployment insurance on a contributory basis had been introduced though not yet passed, one of the features being that after six weeks the recipient of relief must accept work of any kind, whether related to his own trade or not. There is a section of persons in this country who always think the foreigner right in all he does and their own country wrong, so we commend this provision to their particular notice.

That there is a direct connection between unemployment and labour disputes is shown in the "Analysis" to which we have referred above. The great coal strike of 1921, which lasted from the beginning of April until the first week in July, was followed for many months by high figures of unemployment. We therefore turn next to

Trade Disputes,

and here the figures are far more satisfactory. The number of disputes was 601, involving 441,000 workpeople, and the loss of working days was 7,976,000, the lowest number of working days lost since 1918. In 1924 the figures were 710 disputes, 616,000 workpeople, 8,424,000 working days. From those figures it will be seen that if there was an increase in unemployment that was not due to an increase in trade disputes, as sometimes happens, and we think this is a matter of congratulation to employers and employed in a year which has been marked by such serious commercial depression.

In some of the Socialist publications there has been a comparison made between trade disputes and unemployment in the sense that the loss of time due to trade disputes is insignificant when compared with the loss of time due to unemployment. We have on former occasions dealt with this fallacy, but we may here point out that every dispute increases unemployment and therefore also increases the number of workpeople idle, so if the loss of time due to unemployment is a serious matter every cause contributing to it should be studiously eliminated, and "two blacks do not make a white." In the year under review, 40,000 workpeople were rendered unemployed who were in no way a party to the disputes, yet there was no great strike in a key industry comparable with the coal strike of 1921, which involved over 1,100,000 workpeople in one industry. The loss of wages, the loss of markets, sometimes a permanent loss, the increase in prices, besides the inflation of unemployment, are all features connected with disputes, and we are heartily thankful that in a year of great depression such as the past wiser counsels have prevailed and, whatever may have been the provocations, disputes have not been pushed to the extreme. Perhaps coupled with this subject are the

Changes in Rates of Wages.

Fewer workpeople were affected by changes in the general level of wages than in any year since 1914. The figures relating to changes in rates of wages, it will be remembered, do not take account of agricultural labourers amongst several other classes, and had the increases to agricultural labourers been included the net result of the year would have been a slight increase, but as it is it is a net decrease in the weekly wages of those affected of £79,200, but 1924 showed a great net increase, £553,200. Against this slight decrease must be set a decrease in

The Cost of Living.

There was a percentage decrease taking all items included in the return of the Ministry of 5 per cent. in January of this year, as compared with January, 1925—that is, from 80 per cent. above July, 1914, to 75 per cent. The main reduction appears due to less cost of food. All the other items, rent, clothing, fuel, and light, &c., seem practically stationary, but under the heading rent and rates there is an increase of 1 per cent- due to increase in the rates.

Changes in Hours of Labour.

At a time like the present, when the after effects of the War have to be combated and increased production at less cost should be aimed at, it would be gratifying if a change to longer hours of labour could be recorded, but while 1,200 people had their hours increased by an average of 2½ hours a week, 3,800 had their hours reduced by an average of nearly four hours a week.

In our leading article for January 15 we emphasised once again the fact that we are determining our wages with reference to the cost of living, and it is to be wished that the process could be reversed and we based, once again, our standard of living upon what we can earn, or preferably upon what we can produce, but there are no signs of a return to sounder economic principles, nor is this likely to be the case when even unemployment benefit is more or less based on trade union rates.

The Building Trade.

The statistics relating to the building trade are always scanty in the *Gazette* and require little notice. As regards unemployment, no figures are given showing the average throughout the year, but for December last the figures given out of 754,120 insured persons was 101,123, or 13.4 per cent. The building trade, as was stated in the "Analysis," is, however, specially subject to seasonal variations, and December was a month when this would be specially apparent. Employment of skilled operatives is stated to have been good throughout the year, except with painters, who experienced the usual seasonal slackness during the winter months.

In the changes in the general rates of wages in the building and allied trades the net increase of £104,900 in 1924 was followed, last year, by a net increase of £5,200.

In the figures relating to disputes in "Building, Decorating, and Contracting," although the actual number of disputes was only 4 less than in 1924—54 as compared with 58—there was a vast difference in the number of people affected, the numbers being only 6,000, as compared with 114,000, and the loss in working days was 90,000, as compared with 3,134,000.

Conclusion.

From the foregoing statistics it would appear that the industry of the nation was still marking time after the terrible setback of the War, and that no marked impulse forward is yet to be observed. Great patience is requisite in such periods, and the most satisfactory feature in the above statistics is the decline in serious trade disputes. A conciliatory attitude is difficult to maintain in times of depression, but peace in industry, coupled with a wider outlook on industrial matters, and a recognition of the fact that world competition has now to be met, and production must be increased at prices that will meet that competition, and that the sheltered trades, if they absorb too much of the capital of the country by unduly high rates of remuneration, will hinder success in competition, and delay, if not destroy, the chances of recuperation in the general trade of the country, is essential, and we trust in the near future may become apparent, with the result that a turning in the long lane may soon be in sight, if not reached.

VALUATION OF LAND AND HOUSES

IN the course of an address on this subject to the Students' Society of the Association of Rate Collectors and Assistant Overseers, recently, Mr. Sydney A. Smith, F.S.I., F.A.I., said the question of vacant possession entered into the valuations now being made for advances under the latest Housing Act relating to the Acquisition of Small Dwellings, by which the local authorities might advance 90 per cent. of the market value. The point had recently to be considered as to whether the value for this purpose should include the enhancement due to possession, and the valuer concerned included the "possession value" in his report. These valuations were intended to assist purchasers of houses of a certain type, and the lenders of the money were aware of the risk.

The cost of erection was an item which might, in some cases with advantage, be considered by valuers for comparison purposes; it was never reliable for the valuation itself. Such cost of modern residences could be approximately arrived at by the process of cubing. Regard must, however, be had to the character of the building, particularly as to whether it was suitable for the position it occupied, and if old it must be examined to see to what extent it failed to comply with modern needs, and the estimate must be adjusted accordingly. The figure could be depreciated by a suitable percentage. Cube prices were difficult to arrive at at the present moment; probably the ordinary speculating builder could erect small houses readily enough at 1s. or 1s. 2d. a foot; contract-built residences would cost at least 1s. 4d. or 1s. 6d. per foot.

Small residences for occupation presented valuation difficulties at the present time. They were increased by the fact that the experience of most valuers had been gained under pre-war conditions, and it was difficult to accept the new standards as enduring. Such houses, valued for advice to a prospective purchaser, were often treated on an investment basis with an addition for the benefit of vacant possession. Many valuers still liked to value on the pre-war rents, with an addition for

post-war capital increase. Others adopted either the standard rent plus the rent increase permitted by the Rent Restriction Act, or an anticipated modern rent, usually higher.

The valuation of shop properties needed careful consideration just now. Modern rents needed to be treated with caution. There seemed to be no limit to the rent which traders might be found to pay for good shops and the best sites in important towns. A valuer needed to have imagination to see the best purpose to which a property might be put. The acquisition and joining of two properties might increase the total value by their marriage. Houses might be suitable for shops. Larger houses, of little value for single occupation, might be suitable for conversion into flats. Residences might be of greater value for business purposes than for private occupation. Old cottages, and even barns and stables, might convert into "quaint" residences. Large gardens and paddocks might be capable of redevelopment.

A valuer would naturally know the local by-laws to the extent to which redevelopment of land might take place. A local town-planning scheme might interfere with development. Improvement lines under the new Housing Act might hinder rebuilding. Enquiry should also be made as to any restrictive covenants affecting property.

Freehold agricultural land was a class of property which was affected by war conditions. There was usually a good demand for such land because the income was regarded as secure, and there was competition when it came into the market from the tenants and would-be occupiers who bought in the hope of future possession, and also from adjoining owners desirous of increasing their holdings. For suitable land there was often a market from County Councils for the provision of small holdings. Investors now did not often buy agricultural land to hold, although, in large blocks, it was frequently purchased by speculators with a view to re-sale. Agricultural land might improve into accommodation land or building land at any time.

Farms were usually valued in the same way as other property, that was, by comparison with the records of past experience, tabulated on the basis of acreage or of rental value and years' purchase. Agricultural practitioners often favour an acreage basis, where rent was used. The actual rent paid was, in most cases, adopted, but it was first checked to see that it was a proper one according to the acreage, cultivation and quality of the land and suitability of the buildings. Farms would realise 20 to 25 years' purchase of the fair actual or established net annual income. Where a prospective building value attached to land, the multiplier named would be much exceeded, or the future capital value estimated, and the figure deferred on the tables to give the present values.

The rent or acreage value was found by comparison with the known figures of farms in the district, balanced against the general appearance of fertility of the land and the circumstances of the property. The estimate was probably made, field by field, one price for pasture and another for arable, increased or decreased from a standard according to the quality and condition of the land, with something added for buildings and the farmhouse, bearing in mind throughout the nature of the soil, whether it was cold, heavy-working, &c., the general compactness of the farm, the presence of water for stock, the probable cost of upkeep of farm roads, gates, fences, &c., presence of materials for repairs, the value of standing timber and many other points which would be seen by the practised eye. The rent paid by the tenant and his success with the farm would be set against the valuer's own estimate of rent. Proximity to markets, railways and towns, and ability to find labour would all affect the value of a farm.

Timber was usually included in the rental or per acre valuation, without specific addition, unless it be of some extent. Then it would be valued in detail and the figure added. Where timber possessed a special value for amenity purposes, it was usually taken into account in the rental of the property. It must not be included a second time by valuing it in detail.

DILAPIDATIONS AND WASTE.—VIII

By W. T. CRESWELL, Lic.R.I.B.A.
Associate (late Fellow) Surveyors' Institution; F.R.S.I.; Barrister-at-Law.

REBUILDING IN CASE OF FIRE, LIGHTNING, TEMPEST, &c.

A COVENANT to repair and keep in repair the demised premises during the term of the lease binds the covenantor to rebuild the premises in the event of their destruction; unless there is inserted any qualifying clause such as "damage by fire excepted." Further, if destruction is caused by an act of the King's enemies, or that of a stranger, or if the premises are destroyed by accidental fire or negligence, or by lightning, or tempest, or earthquake, the covenantor's liability to rebuild is not removed or affected. Also, if the covenantor is under a covenant to insure, his liability to rebuild under the covenant to repair is not limited either to the amount for which he was bound to insure, or to the amount for which he has in fact insured. (See Digby *v.* Atkinson, 1815, 4 Camp. 275.)

In the absence of express or implied provision the covenantor can claim a reasonable time in which to comply with the covenant, even if that time extends beyond the term of the lease. (See Matthey *v.* Curling, 1922, 2 A.C. 180.)

The Insurable Interest.

A person can only insure property against loss by fire or otherwise, if and when he can prove that he has a definite financial interest therein. Then he is said to have an "insurable interest" therein.

The lessor always has an insurable interest in the property leased, up to its full value. The lessee also has an equal insurable interest if, under the lease, he is liable for "waste," since that includes destruction by fire. Also he has an insurable interest in the premises as a limited owner in possession, up to the damage he estimates may eventuate to himself if for any reason the premises are not rebuilt; or for loss during rebuilding. (See Castellain *v.* Preston, 1883, 11 Q.B.D. 380.)

Lessor's Liability to Repair.

A lessor need not repair unless he has covenanted to do so. (See Bayne *v.* Walker, 1815, 3 Dow 233 H.L.) This still holds if the premises are destroyed by fire; even when the lessee has covenanted to repair excepting in case of damage by fire. (See Weigall *v.* Waters, 1795, 6 Term Rep. 488.) The fact that the lessor has voluntarily insured, and has received the insurance moneys, makes no difference. (See Leeds *v.* Cheetham, 1827, 1 Sim. 146, and Lofft *v.* Dennis, 1859, 1 E. and E. 474.)

The fact that the lessor has covenanted that in case of fire he will reinstate the premises in the same condition as before the fire, does not include the restoration of additions made by the lessee. The lessor is only liable to rebuild what he let. (See Loader *v.* Kemp, 1826, 2 C. and P, 375.)

If the lessor has covenanted for quiet enjoyment it does not bind him to reinstate the premises in case of destruction by fire. (See Brown *v.* Quilter, 1764, 2 Amb. 619.)

Accidental Fire.

1. *Where there is no Covenant to Repair on either side.*

The lessee whose lease does not place upon him the onus of repairing is free from any liability for damage or loss by accidental fire. (See Section 86 of the Fires Prevention (Metropolis) Act, 1774.) The Courts have held that the Act applies to the whole of England and Wales; but in an appeal case before the House of Lords, a suggestion was made that it does not apply to Scotland.

Expenditure of Insurance Money.

A fire policy is a contract of indemnity. Insurance policies provide that the Insurance Company may, without request from anyone, alternatively, reinstate or pay the cash amount to the insured.

Section 83 of the above Act regulates the application of money which is due under a fire policy. It states that the person or persons interested in or entitled unto such houses or other buildings, on damage by fire, can cause the insurance money to be expended in rebuilding the premises. But, in each case, the request must be lodged with the Insurance Company before it has settled with the insured.

So if a tenant accepts a lease which does not bind the landlord to repair, and the premises are burnt down by accidental fire, the landlord can refuse to rebuild, and the tenant must continue to pay rent during the term. But, if the tenant knows that the landlord has insured voluntarily against fire, he is entitled to request the Insurance Company (if his request is lodged before they have settled to pay the landlord the insurance money), that they shall reinstate the premises.

The lessor cannot rebuild the premises himself, and then claim the insurance money where the lessee has insured. He must request the Insurance Company to lay out the insurance money in rebuilding and before they have settled with the lessee. (See Simpson *v.* Scottish Union Insurance Co., 1863, 1 H. and M. 618.)

2. *Where there is a Repairing Covenant.*

Where a lessee is bound to repair, and the premises are destroyed by fire, he is bound to rebuild entirely. If the lessor in addition has himself voluntarily insured, he cannot recover the insurance money from the Insurance Company, but his rights against the lessee being subrogated to the Insurance Company, they can sue the lessee under the repairing covenant to repair, or refund the loss up to the amount of the lessee's liability. Or again, the lessor can, in the first instance, if the lessee's obligation is qualified, recover from the lessee damages up to the amount of his obligations under the covenant, and then, if the total loss exceeds the lessee's obligations, the lessor can recover from the Insurance Company up to the insured amount. (See Darrell *v.* Tibbits, 1880, 5 Q.B.D. 560, and Castellain *v.* Preston [*supra*].)

Where both the lessor and lessee have insured and the premises are burnt down, and the loss is apportioned between the two policies, the lessee is entitled to request that the amount received by the lessor be applied to the rebuilding. (See Reynard *v.* Arnold, 1875, L.R. 10 Ch. 386.)

Any compensation payable by a third party to the insured can be treated by the Insurance Company as a diminution of its liability. (See West of England Fire, &c., Co. *v.* Isaacs, 1897, 1 Q.B. 226.)

If a contract of fire insurance is made by one person on behalf of another, and without the authority of the latter, it cannot be ratified by the party on whose behalf it is made after it has come to his knowledge that the thing insured has been burnt.

Negligence.

If the lessee is not under an obligation to repair, he is still liable to the lessor for damage by fire if it can be shown to be the result of negligence. The provisions of the Act above referred to do not apply when the fire results from negligence, or where a fire is lighted intentionally causing damage to the premises demised or to premises or other property adjoining. (See Filliter *v.* Phippard, 1847, 11 Q.B. 347.)

When the lessee's liability under the covenant to repair requires him only to leave the premises in the same condition as they were at the commencement of the demise, and these premises are burnt down, and in rebuilding the lessor increases their value, then he cannot recover the whole cost of rebuilding, but must deduct and allow therefrom the difference in value between the new and the old building. (See Yates *v.* Dunster, 1855, 11 Exch. 15).

If a lessee enters into an agreement including a covenant to repair, and damage by fire is not excepted, it behoves the lessee to at once insure for the reinstatement of the premises, also for rent payable during the reinstatement, together

with any other expenses as, for instance, the architect's or surveyor's charges.

Unless there is any contrary intention expressed in the lease, the lessee is liable for rent during and until the end of the term in the event of the premises being destroyed, and this is still so even if the premises are uninhabitable and there is no beneficial occupation. (See Balfour *v.* Weston, 1786, 1 Term Rep. 310; and Marshall *v.* Schofield, 1882, 52 L.J. Q.B. 58.)

If a clause is inserted in the lease making the rent not payable in the event of the premises being destroyed by fire or inevitable accident this does not include damage from the tenants' mode of using the premises. In Marshall Bonded Warehouse Co. *v.* Carr (1880) 5 C.P.D. 507, there was an inevitable accident brought about by the lessee himself, for a warehouse fell down because he overloaded one of its floors. It was held that the accident did not come within the scope of the exemption of damage by "fire, storm, tempest, or other inevitable accident."

In Matthey *v.* Curling (1922) 2 A.C. 180, there was a covenant by the lessee to repair, uphold, and deliver up in repair, to insure, and in the event of a fire occurring during the term, to lay out all the insurance money in rebuilding, repairing, and reinstating the damaged buildings. During the term the competent military authority, acting under the Defence of the Realm Regulations, took possession of the dwelling-house and continued in enforced occupation for some months after the expiration of the term. In February, 1919, the house was destroyed by fire, and on March 25, 1919, the term of the lease expired. The lessor claimed the last quarter's rent from the lessee and damages for breach of the covenants. The lessee contended (1) that he was evicted by title paramount, and that his lease was thereby determined; (2) frustration of the purposes for which the lease was granted; and (3) prevention by the lawful acts of the military authorities. It was held that the lessee had not been evicted by title paramount, and must therefore pay the last quarter's rent, and that the occupation by the military authorities was no answer to the obligations of the repairing covenant.

In Redmond *v.* Dainton (1920) 2 K.B. 256, the lease of a dwelling-house contained a covenant by the lessee to repair, uphold, support, sustain, and maintain the dwelling-house and premises and every part thereof; the lessee was held bound under the covenant to reinstate the premises when they were partly destroyed by a bomb discharged from an aeroplane by an enemy of the King.

In Murphy *v.* Hurley (1922) 1 A.C. 369, a landlord in Ireland built a sea wall along the edge of his property to protect the holdings of his tenants from the sea. Subsequently the Land Commission under the Irish Land Act, 1881, introduced a condition: "That rent has been fixed on the basis that it is a condition of the tenancy that the landlord keeps in repair as heretofore the sea wall." The rent was paid and received on this basis, and it was held that although the Land Commission had no jurisdiction to introduce such a condition against the will of the landlord, nevertheless the landlord must be taken to have agreed with each of the tenants to repair the sea wall as provided in the conditions, and that he was liable for the damage caused to the tenants by the incursion of sea water owing to non-repair of the wall. Further, that the landlord was not entitled to notice as a condition precedent to his liability for the damage caused.

Coventry Builders.

At the Coventry and District Association of Building Trades' Employers annual meeting on February 16 (Councillor W. Ivens presiding), Mr. Alfred Clarke was elected as the new president; Councillor T. Hancox and Mr. J. G. Gray, vice-presidents; Mr. W. H. Penn, hon. secretary; Mr. H. Whiteman, treasurer; Messrs. C. E. Harris and A. F. Matts, auditors. The committee members elected were: Messrs. C. A. Anelay, J. Chambers, T. Dalton, W. A. Garlick, O. Kelley, L. P. Nichols and T. Wormell.

NEW BUILDINGS IN LONDON

Balham.—A new station is to be built in Trinity-road, S.W., on the new Morden extension of the City & South London Underground Railway. Messrs. L. & W. Whitehead, Ltd., builders, Portland-place North, S.W.8. Messrs. Adams, Holden & Pearson, architects, 9, Knightsbridge, S.W.

Catford.—It is proposed to build a block of shops and office, together with a large hall, on a site at Rushey Green, S.E. Mr. W. F. Owsley, architect and surveyor, Lewisham, S.E.

Croydon.—Plans have been approved for a large residence at Purley. Mr. William Doddington, A.R.I.B.A., architect, 70, Bousfield-road, New Cross, S.E. Messrs. S. E Everitt & Sons, Ltd., builders, Sydenham-road, Croydon.

Finsbury.—The Ardath Tobacco Co., Ltd., Worship-street, E.C., have acquired premises at the corner of Tabernacle-street and Worship, E.C., for factory extensions.

Flockton-street.—Messrs. Courage & Co., Ltd., brewers, Horsleydown, S.E.1, have decided to reconstruct and set back their public house known as the "George," in Flockton-street, S.E.1. Mr. Kirby, architect to brewery company.

Ham.—A group of 24 houses is to be erected for the Ham Council at a cost of £10,000 by Messrs. K. Craig & Mace, builders.

Hendon.—A housing scheme, comprising residences with garages adjoining, is to be carried out on an estate bounded by Rundell-crescent and Allington-crescent. Messrs. Haymills, Ltd., builders, Vivian-avenue, Hendon, N.W.4.

Holborn.—The Central London Throat, Ear, and Nose Hospital, in Gray's Inn-road, W.C.1, is being rebuilt and extended to the design of Messrs. Young & Hall, architects, 17, Southampton-street, W.C.1.

Hounslow.—A further 44 houses are to be built upon part of the Summerhouse estate in Vicarage Farm-lane. Messrs. William Harbrow, Ltd., builders, South Bermondsey Station, S.E.16.

Hounslow.—Development of the Elthorne Heights estate for residential purposes is to be put in hand, and 120 houses erected as first section. Mr. R. A. C. Churchward, architect, 92, Victoria-street, Westminster, S.W.1.

Hoxton.—It is proposed to effect alterations, internal and external, to St. Leonards Hospital, Hoxton-street, N.1. Mr. F. Danby Smith, F.R.I.B.A., architect, Parliament-mansions, Victoria-street, Westminster, S.W.1.

Ilford.—Corner property, facing the Eastern-avenue and Cranbrook-road, has been purchased by Messrs. Lloyds Bank, Ltd., for a branch office.

Islington.—Work has just commenced upon the first section of the extensions of the Northern Polytechnic, in Holloway-road, N.7, consisting of a building on the centre portion of the existing building over steelwork, &c., already prepared. The total cost is £75,000, section "A" being £21,000. Messrs. John Marsland & Sons, Ltd., builders, 56, South Molton-street, S.W.1. Messrs. T. P. Bennett & Son, architects, Bedford-row, W.C.

Lambeth.—The Great Western Railway Co. have decided to provide extra facilities for dealing with its milk traffic at South Lambeth Station. Messrs. Holliday & Greenwood, Ltd., builders, 11, Buckingham Palace-gardens, S.W.1. Company's engineers, Paddington, W.2, architects.

Leonards-place.—The Midland Bank, Ltd., contemplate the rebuilding of branch premises at Nos. 15–16, Leonards-place, W., to plans prepared by Messrs. Whinney, Son & Austen-Hall, architects, 8, Old Jewry, E.C.2.

Lombard-street. — An important building scheme, likely to take three years to complete, is to be carried out next year by Messrs. Lloyds Bank, Ltd., in connection with the extension of their Lombard-street premises. Several small courts are to be absorbed.

Marylebone.—Contract arrangements are to be made for the building of the proposed new North-Western Polytechnic Institute, at St. Pancras, N.W.1., by the North-Western Polytechnic Institution, 3, Temple-gardens, Temple, E.C.4. The cost is estimated at £112,000, and the building will be put up by sections. Mr. W. E. Riley, F.R.I.B.A. (Messrs. Riley & Glanfield), architect, 6, Raymond-buildings, Gray's Inn, W.C.1.

Marylebone.—The Metropolitan Railway Co. has decided to put in hand the entire modernisation and reconstruction of the station in Euston-square, N.W.1. The plans, which include new surface buildings, booking hall, &c., have been prepared by the Company's architect, Mr. C. W. Clarke.

Neasden.—The Metropolitan Railway Co., Ltd., Baker-street, W.1, proposes to build 34 residences in Verney-street, 10 in Chesham-street, and 2 in Aylesbury-street. Mr. C. W. Clarke, architect to Company, Baker-street Station, W.2.

Northwood.—Plans for six houses in Addison-way have been prepared by Mr. A. S. Soutar, architect, 8, King William-street, Strand, W.C.2.

Oxford-street.—Plans have been placed before the governors of the Royal National Orthopædic Hospital, Great Portland-street, W.1, for a new ward wing. Mr. R. M. Piggot, F.R.I.B.A., architect, 44, Bedford-row, W.C.1. Messrs. Holloway Bros. (London), Ltd., builders, Bridge Wharf, Grosvenor-road, Westminster, S.W.

Purley.—The governors of the Purley School for Boys are considering the provision of a new school for 400 boys. If the scheme is adopted the building will be erected by the Surrey Education Committee, whose architects are Messrs. Jarvis & Richards, 60, Tufton-street, Westminster, S.W.1.

Raynes Park.—The Cannon Hill estate, covering about 250 acres, is to be developed. About 2,000 residences can be provided for, and plans have been approved. Mr. F. H. Hooper, architect, 67, North-street, Clapham Common, S.W.4; and Mr. H. G. Turner, architect, "Benhurst," Perrymount-road, Hayward's Heath.

Regent's Park.—A new reptile house is to be erected in Regent's Park (Zoological Gardens), W.2, for the Council of the Zoological Society. Mr. E. Guy Dawber, P.R.I.B.A., architect, 18, Maddox-street, W.1.

Richmond.—Premises at Nos. 27 and 28, George-street, with frontages in Church-court, occupied by Mr. John Cockburn, jeweller, are to be rebuilt at an early date and new shop and display fronts installed.

Stamford-street.—A large warehouse is to be erected adjacent to present head offices by Messrs. J. Sainsbury, Ltd., wholesale and retail provision merchants, Stamford-street, S.E.1, in Upper Ground-street and Bennett-street, S.E.1. Mr. A. Sykes, architect, 19, Fitzroy-square, W.1.

Stratford.—New shops and showrooms are to be erected, fronting on to the Broadway, E.15. Messrs. Samuel Elliott (Reading), Ltd., builders, Gosbrook-road, Caversham, Surrey. Messrs. George Barnes & Son, FF.R.I.B.A., architects, 121, Victoria-street, Westminster, S.W.1.

Twickenham.—The Middlesex Education Committee proposes to build a new secondary school on a site in Fifth Cross-road, at a cost of £30,000. Mr. H. Crothall, F.R.I.B.A., architect, Guildhall, S.W.1.

Victoria.—A start has been made upon the demolition of the old property with frontages on Wilton-road and Vauxhall Bridge-road, W.1., where extensive rebuilding is projected. Messrs. The Aerated Bread Co., Ltd., Camden Town, N.W.1, are to erect a large restaurant, and the "Windsor Castle" public house is to be replaced by Messrs. Watney, Combe, Reid & Co., Ltd., Westminster, S.W.1, by a modern hotel with large dining accommodation. The remainder of the area will be occupied by shops surmounted by four floors of offices. The respective architects are Messrs. William Woodward & Sons, 15, Great James'-street, W.C.1, for the A.B.C.; and Mr. Malcolm T. Saunders, the surveyor to the brewery.

Wanstead.—An extensive housing scheme, embracing over 160 dwellings, is being carried out on an estate intersected by Wanstead-lane, Preston-gardens, Castleview-gardens, Avenue-gardens, Eastern-avenue, and The Drive. Messrs. S. & G. Robinson, builders.

Wembley.—An application has been made for a licence for a new public house to be built on a site in South Forty-lane, the proposal including tennis courts and pavilion. Messrs. Frank J. Fisher & Son, architects, 38, Bloomsbury-square, W.C.

Westminster.—The London Electric Railway Co. and the Metropolitan Railway Co. are to obtain powers to enlarge and improve St. James' Park tube station, S.W. 1, including the acquisition of property in Broadway, S.W. 1, and the erection of a large office building for administrative purposes. Mr. Z. Knapp, director of construction, Electric Railway House, Broadway, S.W. 1. Messrs. Adams, Holden & Pearson, FF.R.I.B.A., architects, 9, Knightsbridge, S.W. 1.

Westminster.—The Grosvenor Hospital for Women in Vincent-street, S.W. 1, has decided to build a new home, with dining and recreation rooms, &c., for the nursing staff. Messrs. Fox, Penfold & Jones, architects, 13, John-street, Bedford-row, W.C. 1.

Wimbledon.—New private and public wards, clinics, staff accommodation, &c., are to be added to the buildings forming the Wimbledon and Merton Hospital, S.W. Mr. J. Stuart Thompson, A.R.I.B.A., architect, 49, Hill-road, Wimbledon, S.W. 10.

Wimbledon.—It is proposed to build a mosque for worshippers of the Ahmadin Movement in Islam, at a cost of approximately £30,000. Mr. Charles H. Rosher, architect, 17, Dane-street, Holborn, W.C. 1.

Paddington Building Scheme.

The Paddington Borough Council proposes the erection of a public hall, five shops and a lending library on the Lodge site, at an estimated cost of £90,847.

Holborn Building Scheme.

The Holborn Borough Council proposes to build a five-story block of 15 tenements on the site of Nos. 17 to 21, Betterton-street, W.C.2, at an estimated cost of £10,000.

Bradford Grammar School Scheme.

The Bradford City Council proposes to build a new grammar school, to accommodate 1,000 boys, at an estimated cost of £100,000.

A £270 Cottage.

The report for this month of the National Federation of House Builders states that a scheme for several hundred houses is now being carried out in Warrington, where two-bedroom cottages, in blocks of four, are being sold for £370 each, less £100 subsidy. The houses are approximately 16 ft. 6 in. frontage and 22 ft. 6 in. deep. They contain a living room 13 ft. by 13 ft. 6 in., a working scullery, pantry, and w.c. on the ground floor; and upstairs two bedrooms and a bathroom. The superficial area for subsidy purposes is about 650 ft. The local council is advancing £260 on the houses and the purchaser has to find only £10 to obtain possession.

The East End Dwellings Co., Ltd.

At the forty-third ordinary general meeting of this company, held on Monday, February 22, at the firm's office, 27, Chancery-lane, W.C.2, it was stated that the profit and loss account showed a credit balance for the year of £19,300, making, with £1,908 brought forward from 1924, a total of £21,208. Of this sum £8,000 had been carried to reserve, which now amounted to £116,000, and interim dividends for the first half of 1925 at the rate of £4 per cent. per annum (less tax) on the preference shares, and £5 per cent. per annum free of income tax, on the ordinary shares, had been paid. The directors recommended a similar distribution for the half-year ended December 31st, 1925.

RATES OF WAGES IN THE BUILDING TRADE

Every endeavour is made to ensure accuracy, but we cannot be responsible for errors.

	Masons.	Bricklayers.	Carpenters. Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers.
Aberdare	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Accrington	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Altrincham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Ashton-under-Lyne	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Barnsley	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Barrow-in-Furness	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Barry	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bath	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bedford	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Birkenhead	1/9	1/9	1/8½	1/9	1/9	1/9	1/8½	1/4
Birmingham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bishop Auckland	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Blackburn	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Blackpool	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bolton	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bournemouth	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bradford	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Brentwood	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bridgwater	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Brighton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bristol	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Burnley	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Burton-on-Trent	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bury	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Cambridge	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Cardiff	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Chatham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Chelmsford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Cheltenham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Chester	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Chesterfield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Colchester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Coventry	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Crewe	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Darlington	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Derby	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Doncaster	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Dudley	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7	1/2½
Durham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
E. Glam. (Mon. Vall.)	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Eastbourne	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Exeter	1/7	1/7	1/7	1/7	1/7	1/7	1/6	1/2½
Folkestone	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Gloucester	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Grantham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Grays	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/7½	1/3½
Grimsby	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Great Yarmouth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Guildford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/3½
Halifax	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Harrogate	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Hartlepools	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/0½
Hastings	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/1½
Hereford	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/3½
Huddersfield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Hull	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/1½
Ipswich	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/3½
Lancaster	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/2
Leamington Spa	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/3½
Leeds	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Leicester	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/2
Lichfield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/3½
Lincoln	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/4
Liverpool	1/9	1/9	1/8½	1/9	1/9	1/9	1/8½	1/4
Llanelly	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
London (12 m. radius)	1/9½	1/9½	1/9½	1/9½	1/9½	1/9½	1/8½	1/4
London (12–15 m. radius)	1/9	1/9	1/9	1/9	1/9	1/9	1/8	1/3½
Loughborough	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/1½
Luton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Maidstone	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/3½
Manchester	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Mansfield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Merthyr Tydfil	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Middlesbrough	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Newcastle-on-Tyne	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Newport, Mon.	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/2½
Northampton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/1½
Norwich	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/3½
Nottingham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/1½
Oakham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/3½
Oldham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/1½
Oxford	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/3½
Plymouth	1/8	1/8	1/8	1/8	1/8	1/8	1/7	1/3½
Pontypridd	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Portsmouth	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Preston	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Reading	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Rochdale	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Rochester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Rugby	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
St. Albans	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
St. Helens	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Scarborough	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Sheffield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Shrewsbury	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Southampton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Southend-on-Sea	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Southport	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
South Shields	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Stockport	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Stockton-on-Tees	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Stoke-on-Trent	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Stroud	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5	1/1½
Sunderland	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Swansea	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Swindon	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Taunton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Torquay	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Tunbridge Wells	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Wakefield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Walsall	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Warrington	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
West Bromwich	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Wigan	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/1½
Windsor	1/6	1/6	1/6	1/8	1/6	1/6	1/6	1/3½
Wolverhampton	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/2
Worcester	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
York	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½

(For rates of wages in the Building Trade in Scotland, see page 380.)

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this List, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in; the name and address at the end is the person from whom or place where quantities, forms of tender, &c., may be obtained.

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, etc.

MARCH 1.—**Arklow.**—REBUILDING.—Portions of the approach and boundary walls at Arklow stations, for the Gt. Southern Rly. C. E. Riley, secretary, Kingsbridge Station, Dublin. Deposit £1 1s.

MARCH 1.—**Cobh.**—HOUSES.—Sixteen houses at Newtown-road, Cobh (Queenstown), co. Cork, for the Irish Sailors' and Soldiers' Land Trust. Engineer, 30, Lower Fitzwilliam-street, Dublin. Deposit £2 2s.

MARCH 1.—**Doncaster.**—HOUSES.—Twenty-six houses in King's-road and Queen's-road, Askern, for the R.D.C. W. R. Crabtree, surveyor, Nether Hall.

MARCH 1.—**Dunmow.**—HOUSES.—Four at Crick's-green, Felsted; four at Little Dunmow; four at Great Bardfield, and four at Broxted, for the R.D.C. J. Plumbley, Sanitary Surveyor, 58, New-street.

MARCH 1.—**Galway.**—FLUE.—New flue from steam boiler at Galway Hotel, for the Gt. Southern Rly. Chief Engineer, Broadstone Station, Dublin. Deposit £1 1s.

MARCH 1.—**Hammersmith.**—COTTAGES.—Construction (in brick) of 14 cottages and other incidental work on the Old Oak estate, Old Oak Common-lane, for the London County Council. Architect to the Council, The County Hall (Room No. 3), Westminster Bridge, S.E.1. Deposit £2 to the cashier.

MARCH 1.—**Keighley.**—CONVENIENCES.—Tramways shelter, public conveniences, &c., at Ingrow Bridge, for the T.C. Borough Architect. Deposit £1 1s.

MARCH 1.—**Middlesex.**—HOUSES.—Erection and completion on the Priory-road site, Hampton, for the U.D.C. Sidney H. Chambers, Surveyor to the Council, Public Offices, Hampton.

MARCH 1.—**Newport (Isle of Wight).**—WALL.—Reinforced concrete quay wall on the east side of the River Medina, for the T.C. E. A. Slater, Borough Surveyor.

MARCH 1.—**North Berwick.**—HOUSES.—Six blocks of four houses each, at East-road, for the T.C. A. Robertson, Burgh Surveyor.

MARCH 1.—**Nottingham.**—EXTENSION.—Extension and alterations to relief offices, in Shakespeare Villas, for the T.C. Starr & Hall, architects, 12, Victoria-street. Deposit £2 2s.

MARCH 1.—**Nottingham.**—LAVATORY.—Public lavatory and warehouse premises in Greyhound-street, for the T.C. W. J. Board, Town Clerk. Deposit £2.

MARCH 1.—**Par Station.**—HOUSE.—Residence at Tyward-heath, Par Station, Cornwall. A. J. Cornelius, F.R.I.B.A., architect, Truro.

MARCH 1.—**Plymouth.**—BAKERY.—In Mill-street, for H. Matthews & Sons, Ltd. E. H. Carder, architect and surveyor, 4, Athenæum-terrace. Deposit £2 2s.

MARCH 1.—**Plymouth.**—REPAIRS.—To 26, High-street, Stonehouse, 24, Willow-street, Plymouth, and 9, Mount-street, Devonport, for the C.B. R. J. Fittall, Town Clerk.

MARCH 1.—**Quorndon.**—CONVERSION.—Of the existing contact beds at their disposal works, into settlement tanks and percolating filters, for the P.C. Pick, Everard Keay & Gimson, engineers, 6, Millstone-lane, Leicester. Deposit £1 1s.

MARCH 1.—**Reigate.**—HOUSES.—Eight at Burstow, six at Leigh, for the R.D.C. W. J. Hatton, District Surveyor, 48, High-street.

MARCH 1.—**Warrington.**—ALTERATIONS.—Alteration to 6, Horse-Market-street, for the C.B. S. P. Silcock, architect, 6, Egypt-street. Deposit £1 1s.

MARCH 2.—**Barnstaple.**—ADAPTATION.—Of stables as a laundry at Hawley Tuberculosis Hospital, for the Devon C.C. Architect, 1, Blackall-road, Exeter.

MARCH 2.—**Belfast.**—SCHOOL.—New school, open shed, lavatories, &c., at Barrack-street, for the Christian Brothers. F. McArdle, architect and civil engineer, 29, Rosemary-street. Deposit £5 5s.

MARCH 2.—**Bristol.**—POLICE AND FIRE BRIGADE PREMISES.—Erection of new premises, Bridewell-street, for the Watch Committee of the Council. Bernard & Sons, quantity surveyors, 26, Orchard-street, Bristol. Deposit £5 5s., payable to the City Treasurer.

MARCH 2.—**Cromer.**—CONVENIENCES.—Public conveniences on the West Promenade, for the Protection Commissioners. Buckingham & Berry, 43A, Prince of Wales-road, Norwich.

MARCH 2.—**Maldon.**—HOUSES.—Six houses in pairs in Kelvedon-road, Wickham Bishops, for the R.D.C. Wm. Almond, surveyor, 6, Market-hill.

MARCH 2.—**Sunderland.**—CONCRETING.—Mass concrete retaining wall at Roker Cliff Park, for the C.B. Borough Engineer. Deposit £2 2s.

MARCH 3.—**Galashiels.**—HOUSES.—Eight houses at Wood-street, for the T.C. J. & J. Hall, architects.

MARCH 3.—**Ongar.**—COTTAGES.—Four cottages at Stanford Rivers, for the R.D.C. P. Pearce, building surveyor. Deposit £1 1s.

MARCH 3.—**Tottenham.**—HOUSES.—Erection of 76 houses, 26 shops, with dwellings over, and 8 garages, at the White Hart-lane housing scheme, for the Tottenham D.C. Three distinct prices; may be accepted separately or together as a lump sum. E. C. P. Monson, F.R.I.B.A., F.S.I., the Council's architect, Finsbury Pavement House, 120, Moorgate, London, E.C.2. Deposit £5.

MARCH 4.—**Aberdare.**—HALL.—Hall, &c., at Station-street, Aberdare, for D. Morris Powell. T. Roderick & Sons, Architects, Clifton-street. Deposit £1 1s.

★MARCH 4.—**Folkestone.**—PUBLIC CONVENIENCE.—Erection of a women's public convenience in Pleydell-gardens, Folkestone. A. E. Nichols, M.Inst.C.E., Borough Engineer, 11, Church-street, Folkestone. Deposit £2 2s.

MARCH 4.—**Ireland.**—RESTORATION.—Of Maynooth ex-R.I.C. Barracks, Co. Kildare; Shrule ex-R.I.C. Barracks, Co. Mayo; Clougher ex-R.I.C. Barracks, Co. Donegal; and erection of new station for Garda Siochana, Araglen, Co. Cork, for the Commissioners of Public Works. J. J. Healy, Secretary, Oifig Oibreach Puibli (Office of Public Works), Baile Atha Cliath.

MARCH 4.—**St. Thomas.**—HOUSES.—Four houses at Whimple, near Exeter, for the R.D.C. R. M. Challice & Son, architects and surveyors, 7, Bedford-circus, Exeter.

MARCH 4.—**Wakefield.**—HEATING.—Extending the low-pressure hot-water heating system at the Post Office and Telephone Exchange, for H.M.O.W. Contracts Branch, H.M. Office of Works, King Charles-street, S.W.1. Deposit £1 1s.

MARCH 5.—**Crompton.**—CENTRE.—Infant welfare centre and school clinic, for the U.D.C. Surveyor. Deposit £2 2s.

MARCH 5.—**Huntly.**—PAINTING.—Painting at the Jubilee Cottage Hospital, for the Committee. Kelly & Nicol, architects, 367, Union-street, Aberdeen.

MARCH 5.—**Liverpool.**—SHED.—Car shed and administration block (constructed in reinforced concrete), Smithdown-road, for the T.C. Land Steward and Surveyor. Deposit £5 5s.

MARCH 5.—**St. Faith's.**—PAINTING.—Painting and repairing the outside of the Council's cottages in the undermentioned parishes: St. Faith's (2 sites), 8 houses; Hellesdon, 2 houses; Horsford, 8 houses; Felthorpe (2 sites), 4 houses; Wroxham (2 sites), 12 houses; Haynford, 4 houses; Sprowston (2 sites), 10 houses; Drayton, 8 houses; Spixworth, 4 houses; Frettenham, 4 houses; Horstead, 6 houses; Attle-bridge, 6 houses; Lenwade, 6 houses; Aiderford, 2 houses, for the R.D.C. C. Row, Clerk, 1, Redwell-street, Norwich.

MARCH 6.—**Chapel-en-le-Frith.**—HOUSES.—Six non-parlour type houses at Batham Gate, near Buxton, for the R.D.C. T. Dinsdale, Inspector and Surveyor. Deposit £2 2s.

MARCH 6.—**Eccles.**—LIGHTING.—Installation of electric light wiring and fittings in seven houses in course of erection in Anson-street, Monton, for the T.C. Borough Electrical Engineer, Electricity Works, Cawdor-street, Patricroft. Deposit £1 1s.

MARCH 6.—**Kiveton Park.**—HOUSES.—Forty-six type "A" and four type "B" houses, at Station-road, for the R.D.C. J. Haslam, architect, Ryton Chambers, Bridge-street, Worksop. Deposit £2 2s.

MARCH 6.—**Loanhead.**—HOUSES.—Thirty-two houses in eight blocks, for the T.C. Geo. B. Deas, architect, Central Chambers, Kirkcaldy. Deposit £1.

MARCH 6.—**Musselburgh.**—HOUSES.—Forty-eight houses at the housing site, Monktonhall-road, for the T.C. Burgh Surveyor.

MARCH 6.—**Rothwell.**—HOUSE.—Detached house at Rothwell, near Leeds. H. L. Fox, architect and chartered surveyor, 25, Bond-street, Leeds.

MARCH 6.—**Salford.**—HEATING.—Heating, hot-water supply and ventilating installations at the Old People's Homes, Stott-lane, Pendleton, for the B.G. C. Swain, architect, 12, Exchange-street, Manchester. Deposit £3 3s.

MARCH 8.—**Arigna.**—BUILDING.—Completion of the station house at Arigna, for the Great Southern Railway. C. E. Riley, secretary, Kingsbridge Station, Dublin. Deposit £1 1s.

MARCH 8.—**Bucklow.**—HOUSES.—Eight parlour-type houses in pairs and twenty-two non-parlour type houses, for the R.D.C. R. Curtis Cordon, engineer and surveyor, 25, Station Buildings, Altrincham. Deposit £2 2s.

MARCH 8.—**Clutton.**—HOUSES.—Ten houses at Stanton Drew, for the R.D.C. Mr. Hawker, architect, Council Houses, Temple Cloud. Deposit £2 2s.

MARCH 8.—**Clutton.**—HOUSES.—Eight houses at East Harptree, for the R.D.C. Mr. Hawker, architect, Council Houses, Temple Cloud. Deposit £2 2s.

MARCH 8.—**Eastbourne.**—EXTENSION.—Erection, in steel or ironwork, of the extensions to the existing building at the Electricity Works, for the C.B. J. K. Brydges, Borough Electrical Engineer. Deposit 10s.

MARCH 8.—**Egremont.**—SCHOOL.—Elementary school to accommodate 216 scholars on the Thornhill housing site, Beckermet, for the Cumberland E.C. J. Forster, F.R.I.B.A., County Architect, The Courts, Carlisle. Deposit £1 1s.

MARCH 8.—**Gildersome.**—HOUSES.—Eight houses on the Vicarage site, for the U.D.C. W. Wilby, surveyor.

MARCH 8.—**Llanelly.**—HOUSES.—Forty-eight parlour type houses on the Llanerch site, for the T.C. Borough Surveyor. Deposit £2.

MARCH 8.—**Sutton Coldfield.**—HOUSES.—Pairs of parlour and non-parlour type to be erected on White-house Common-road, Walmley Ash-road, and Jockey-road, for the T.C. W. A. H. Clarry, Borough Surveyor.

MARCH 8.—**Swanlinbar.**—REPAIRS.—Repairs and other works at Swanlinbar and Kinawley R.C. Churches, for the Rev. Patrick O'Reilly, P.P., Swanlinbar. J. Donnelly, M.R.I.A.I., architect, Enniskillen.

★MARCH 8.—**Walton-upon-Thames.**—HOUSES.—Erection of fifty non-parlour in Rodney-road, for the U.D.C. Contractors may tender for the fifty houses as a whole or in sections of not less than ten houses. G. B. Carvill, architect, 1, Charing-cross, W.C. 2. Deposit £2 2s.

MARCH 8.—**Workington.**—HOUSES.—Fifty houses on the Salterbeck housing site, for the T.C. H. B. Williams, Borough Engineer and Surveyor. Deposit £2 2s.

MARCH 9.—**Allerton Bywater.**—ADDITIONS.—Additions and alterations at Allerton Bywater, Lock-lane Council school, for the West Riding E.C. Education Department, County Hall, Wakefield.

MARCH 9.—**Armthorpe.**—SCHOOL.—New school at Armthorpe, near Doncaster, for the West Riding E.C. The Education Department, County Hall, Wakefield.

MARCH 9.—**Brighton.**—HOUSES.—Erection of 28 houses in Freshfield-road, for the Borough Council. To either of the panel architects, Clayton & Black-10, Prince Albert-street; T. Garrett & Son, 34, Ship, street; E. Wallis Long, 6, Old Steine; W. H. Overton, 22, Ship-street. Deposit £1.

MARCH 9.—**Colne, Lancs.**—POST OFFICE.—Erection of at Colne, for the Commissioners of His Majesty's Office of Works. Contracts Branch, H.M.O.W., King Charles-street, London, S.W.1. Deposit £1 1s. (cheques payable to the Commissioners).

★MARCH 9.—**Norwich.**—SHOPS WITH FLATS.—Erection of 13 shops with flats over and a house on the Earlham Housing estate, for the Corporation. J. S. Bullough, A.M.Inst.C.E., City Engineer, Guildhall. Deposit £5.

MARCH 9.—**Sharlston.**—HOUSE.—Caretaker's house for the West Riding E.C. Education Department, County Hall, Wakefield.

MARCH 9.—**South Hiendley.**—SCHOOL.—At South Hiendley, near Wakefield, for the West Riding E.C. Education Department, County Hall, Wakefield.

MARCH 9.—**West Derby.**—MODERNISING.—Walton Institution, for the B.G. Ernest B. Baily, L.R.I.B.A., 9, Cook-street, Liverpool. Deposit £1 1s.

MARCH 10.—**Clonmel.**—COTTAGES.—Repairs to Cottages in scheme No. 133, Clonmel R.D., for the Irish Sailors and Soldiers Land Trust, 30, Lower Fitzwilliam-street, Dublin. Engineer. Deposit £1 1s.

MARCH 10.—**Goole.**—BUILDING.—Waterworks Pumping Station at Pollington, for the U.D.C. E. J. Silcock, consulting engineer, 25, Victoria-street, Westminster. Deposit £5.

MARCH 10.—**Haslingden.**—EXTENSION.—Extensions to the secondary school, comprising assembly hall and four classrooms, &c., for the Lancashire E.C. H. Littler, County Architect, 16, Ribbledale-place, Preston. Deposit £2.

MARCH 10.—**Rothwell.**—HOUSES.—Seventy-eight scullery houses on the Rathwell Haigh and Lofthouse housing sites, for the U.D.C. J. Southwart, surveyor. Deposit £1 1s.

MARCH 12.—**Ainstable.**—GATE.—Lych gate at Ainstable. Rev. H. F. Tilbury, Ainstable Vicarage, Carlisle.

MARCH 12.—**Newark.**—BUILDING.—Electricity sub-station in connection with the proposed electricity sheme, for the T.C. H. Tallents, Town Clerk. Deposit £1 1s.

MARCH 12.—**Nottingham.**—HOUSES.—252 house on the Windmill-lane housing estate, for the T.C City Engineer. Deposit £1.

MARCH 13.—**Wallasey.**—SCHOOL.—New school in Egerton-grove, Liscard, for the C.B. E. Kirby & Sons, F.R.I.B.A., architects, of 5, Cook-street, Liverpool. Deposit £2 2s.

★MARCH 15.—**Hanwell.**—HOUSES.—Erection of 30 houses on the Hopefield Estate, for the U.D.C. Council Surveyor's Office, Cherington-road, Hanwell, W. 7.

MARCH 15.—**Navan.**—HOUSES.—Six houses at Cox's Field, Abbeylands, An Uaimh, for the U.D.C. Peter Foley, clerk, An Uaimh.

MARCH 18.—**Drogheda.**—HOUSES.—Twelve houses at Sandyford Alley, Drogheda, for the Irish Sailors and Soldiers Land Trust. Engineer, 30, Lower Fitzwilliam-street, Dublin. Deposit £2 2s.

MARCH 18.—**Manchester.**—OFFICES.—General offices, mess room, &c., on the site of the new gasworks at Partington, for the T.C. Wm. Newbigging, consulting engineer, 5, Norfolk-street. Deposit £2 2s.

★MARCH 24.—**Hertfordshire.**—SCHOOL.—Erection and completion of a new County Council school to accommodate 200 scholars at Borrington, for the County Council. Lieut.-Col. A. E. Prescott, County Surveyor and Architect, County Surveyor's Office, Hatfield, Herts.

★MARCH 29.—**Salford.**—ALTERATIONS: ELECTRICAL TREATMENT ROOMS.—Certain alterations at the Union Infirmary, Stott-lane, Pendleton, for the Guardians. E. H. Inchley, Clerk, Poor Law Offices, Eccles New-road. Deposit £2 2s.

★MARCH 31.—**Gloucestershire.**—POLICE STATION.—Erection of a Police Station at Pucklechurch, near Bristol, for the Standing Joint Committee of the Gloucestershire County Council. E. S. Sinnott, County Surveyor, Shire Hall, Gloucester. Deposit £2 2s.

NO DATE.—**Brecon.**—BUILDING.—Rebuilding of the farm buildings at Greenway Farm, Brecon, for The Powell Duffryn Steam Coal Co., Ltd. Geo. Kenshole, architect, 30, Charles-street, Cardiff.

NO DATE.—**Co. Kildare.**—REPAIRS.—To Palmerstown House. White & Meares, 16, Molesworth-street, Dublin.

NO DATE.—**Kirkby Overblow.**—HOUSE.—At Kirkby Overblow, for A. N. Simpson. Beevers & Dixon, architects, 26, Park-row, Leeds.

NO DATE.—**Renfrew.**—HOUSES.—Sixty-four houses at Neilston, for the C.C. Jas. A. M'Callum, District Clerk, 15, West George-street, Glasgow.

NO DATE.—**Stalybridge.**—HOUSES.—Eighteen houses on land near Thompson Cross, for the T.C. Borough Surveyor.

NO DATE.—**Steppshill.**—HOUSES.—Thirty houses on the south side of Cumbernauld-road, for the Lanarkshire C.C. Jas. A. M'Callum, District Clerk, 15, West George-street, Glasgow.

NO DATE.—**Tyrrellspass.**—PLASTERING.—For plastering Tore House. F. J. Macaulay, architect, 24, Nassau-street, Dublin.

MATERIALS, etc.

MARCH 1.—**Battersea.**—STORES AND MATERIALS.—Tenders are invited from contractors and others for materials and stores for the Borough Council. The Clerk, Town Hall, Lavender Hill, S.W.11.

MARCH 1.—**Bredbury and Romiley.**—MATERIALS.—Granite macadam and chippings (tarred and untarred), slag macadam and chippings (tarred and untarred), limestone macadam (tarred and untarred), tar compounds, stone and cement kerbs, flags, and setts, granite setts, ironwork (gulleys, street grids, manhole covers, &c.), sanitary pipes, Portland cement, disinfectants, for the U.D.C. S. Axon, Clerk to the Council, Council Offices, George-lane, Bredbury, near Stockport.

MARCH 1.—**Dublin.**—PIPES.—Lead pipe and sheet lead for the C.B. J. J. Murphy, Town Clerk.

MARCH 1.—**Ealing.**—MATERIALS.—Cement, limes and pipes, slablaying, granite chippings, limestone tarpaving, tarred macadam and tarpainting roads, tar, ironmongery, iron castings, for the Ealing B.C. W. R. Hicks, Borough Surveyor.

MARCH 1.—**East Retford.**—MATERIALS.—Broken slag, slag screenings, and tar, for the R.D.C. J. Turrill, surveyor, 31, Market-place.

MARCH 1.—**Hertfordshire.**—TAR.—Refined tar, for the C.C. Lieut.-Col. A. E. Prescott, county surveyor, Hatfield, Herts.

MARCH 1.—**Lanark.**—MATERIALS.—Tar and bituminous compounds, tar macadam work, and surface tar spraying work, for the C.C. W. A. Chapman, Acting Road Surveyor, County Buildings, 149, Ingram-street, Glasgow.

MARCH 1.—**London.**—MATERIALS.—Artificial stone paving, repairs to asphalte footpaths, iron castings, cement, lime, bricks and firebricks, tarred ragstone, tar spraying roads, tarred slag, timber, granite, flints and ragstone, stoneware goods, Thames ballast, sand and shingle, &c., for the Lewisham B.C. J. W. Shuter, Town Clerk, Town Hall, Catford.

MARCH 1.—**London.**—MATERIALS.—Ballast and sand, carriageways and footway repairs (asphalte), carriageway repairs (macadam), carriageway repairs (granite sett pavement), carriageway repairs (wood pavement), cement and lime, flags (sandstone and artificial), footway and channel (masons' work) granite setts kerb and channels, gullies (stoneware) construction, painters' materials and miscellaneous oils, sewerage and drainage (minor works), wood paving blocks, for the Westminster City Council. J. Hunt, Town Clerk, City Hall, Charing Cross-road, W.C.2.

MARCH 1.—**Loughton.**—MATERIALS.—10,000 gallons of refined tar, 350 yds. of pea shingle, 10 tons of tarred toppings, for the U.D.C. H. White, surveyor.

MARCH 1.—**Middlesbrough.**—MATERIALS.—Annealed scoriae (broken), bricks, castings, concrete flags and kerbs, pitch and tar, sanitary pipes, gulleys, junctions, &c., slag (broken), tarred whinstone and slag, timber, whinstone and granite (broken), whinstone and granite setts and kerbs, for the C.B. S. E. Burgess, M.Inst.C.E., Borough Engineer.

MARCH 1.—**Ongar.**—MATERIALS.—Granite, tar and bitumen, and surface dressing, for the R.D.C. H. C. Phillips, District Surveyor.

MARCH 1.—**Smethwick.**—MATERIALS.—Bricks, cement, lime, granite for roadmaking, granite chippings slag, kerb, setts, castings, stoneware pipes, for the C.B. R. Fletcher, Borough Engineer and Surveyor.

MARCH 1.—**Sunbury-on-Thames.**—MATERIALS.—Refined tar, tarmacadam, tarpaving and ¾in. clean shingle, for the U.D.C. H. F. Coales, engineer and surveyor.

MARCH 1.—**Swanage.**—MAINS.—37 ton of 3 in. cast-iron pipes, class B, straight spigot and socket, British standard specification. C. Ratcliff, surveyor.

MARCH 1.—**Teddington.**—MATERIALS.—Cement and lime, distilled tar, flints and shingle, granite, pipes and gullies, tarpaving, for the U.D.C. M. Hainsworth, surveyor.

MARCH 1.—**Wellingborough.**—MATERIALS.—Best Leicestershire granite, 2 in. and 1½ in. gauge; granite kerb; best granite, 3 in., ½ in., ¾ in. and ¼ in. chippings; granite, 1½ in., treated with "Bi-tarco"; best hard limestone, 2 in. and 1½ in.; best hard limestone, ¾ in. and ¼ in. chippings; stoneware pipes and gullies; patent paving slabs; Crich or Buxton lime; best broken slag, 2½ in., 1½ in. and 1 in.; best ¾ in. screened slag chippings; best slag, 2½ in. and 1½ in., treated with "Bi-tarco"; best slag, 2½ in. and 1½ in., mixed with refined tar, for the U.D.C. R. Stevenson Henshaw, engineer and surveyor.

MARCH 1.—**West Lancashire.**—MATERIALS.—Highway materials, tar-macadam, broken granite, refined tar, kerbs, setts), pavior's work, for the R.D.C. R. Rosbotham, surveyor, Derby-street, Ormskirk.

MARCH 1.—**Wrexham.**—MATERIALS.—Macadam, setts, kerbs, channels and flags, chequered tiles, earthenware pipes and gullies, cement and lime, iron castings, sanitary materials and disinfectants, and timber, for the T.C. Borough Surveyor, 1, Grosvenor-road.

MARCH 2.—**Epsom.**—MATERIALS.—Stonefilled asphalt carpeting, broken granite, tarviated granite, granite chippings, limestone chippings, flints, fine gravel, ballast, hoggin, washed sand and shingle, pit sand, Portland cement, stoneware pipes, concrete tubes, for the R.D.C. T. E. Ware, surveyor, Waterloo-road.

MARCH 2.—**Leeds.**—MATERIALS.—Bitumen (surface dressing), sand, gravel, tar, Yorkshire flags, setts and kerb, concrete flags, broken granite or whinstone macadam stone (2 in. to 2½ in. gauge), ¼ in. to dust limestone, 3 in. to 5 in. rough dross, ¼ in. and 1 in. tarred slag, reinforcing fabric, quick-setting cement, for the T.C. E. W. Cockeriyne, engineer, 1, Swinegate.

MARCH 2.—**Leeds.**—MATERIALS.—Plumber materials, Portland cement, bitumen compound, sand, gravel, quick-setting cement, for the T.C. W. Chamberlain, General Manager, 1, Swinegate.

MARCH 2.—**Liverpool.**—MATERIALS.—Lead pipe, cast iron pipes, miscellaneous iron pipes and castings, sluice valves, for the T.C. Water Engineer, Alexandra Buildings, 55, Dale-street.

MARCH 2.—**Smallburgh.**—MATERIALS.—Flints (broken to pass 2 in. gauge, and free from silt), granite, marl beach stones (hand picked), clay, for the R.D.C. W. L. Lewis, District Surveyor, Stalham.

MARCH 3.—**Alfreton.**—MATERIALS.—2,000 tons tarred slag, 1,500 tons plain slag, 850 tons ¾ in. Trent gravel, for the U.D.C. R. F. Ward, surveyor.

MARCH 3.—**Bridlington.**—MATERIALS.—1,000 tons of whinstone, 1,000 tons of tarred slag, 2,500 tons of dry slag, 1,500 tons of slag and whinstone chips, for the R.D.C. J. Haggitt, District Surveyor, 42, Marshall-avenue.

MARCH 3.—**East Ham.**—MATERIALS.—Glazed stoneware pipes and gulley fittings, &c., Portland cement, grey stone lime, lime for sewage precipitation, bricks, ballast, sand, &c., granite (broken, crushed, chippings and kerb and channelling), cast-iron work, gulleys, &c., paving flags, for the C.B. C. Eustace Wilson, Town Clerk, Town Hall, East Ham, E.6.

MARCH 3.—**East Ellos.**—MATERIALS.—Granite, slag and gravel, for the R.D.C. S. S. Mossop, jun., West-end, Holbeach.

MARCH 3.—**Goole.**—MATERIALS.—Granite macadam, slag, bituminous macadam, concrete flags, concrete kerb, concrete channel, stoneware pipes, Portland cement, gravel and sand, refined tar or bituminous compound, for the U.D.C. J. H. Castle, engineer and surveyor.

MARCH 3.—**Hollingbourne.**—MATERIALS.—Road materials, including tar-macadam, granite and tar, or other surface dressing, for the R.D.C. F. Miskin, Clerk, 33, Earl-street, Maidstone.

MARCH 3.—**Horsham.**—MATERIALS.—3,500 tons of Leicester, Cornish, or other approved granite, 2,250 tons of Kentish ragstone, Mendip, Sevenoaks or other approved stone, 900 tons of granite chippings, 2,000 tons of flints, 1,250 tons of gravel or sand for tar-painting, for the R.D.C. W. R. Guilford, surveyor, 42, Albion-terrace.

MARCH 3.—**London.**—MATERIALS.—Gravel, sand and ballast, lime, cement and brick, iron castings, stoneware pipes, stone, tar spraying, for the Holborn B.C. L. Walford, Town Clerk, Town Hall, 197, High Holborn, W.C.1.

MARCH 3.—**Morley.**—MATERIALS.—Lime, sand, Portland cement, flags, setts, kerb, earthenware pipes, &c., for the T.C. F. Turner, Borough Engineer.

MARCH 3.—**Richmond (Yorks).**—MATERIALS.—Whinstone and slag, also for leading stones for the roads, for the R.D.C. T. W. Beadle, surveyor, North Cowton, Darlington.

MARCH 3.—**Rothwell.**—MATERIALS.—Broken granite, slag, tarred slag, hard York setts, flags, kerbs, gully grates and frames, and earthenware pipes, gullies, manhole covers, &c., for the U.D.C. E. F. Moorhouse, Clerk to the Council.

MARCH 3.—**Warwickshire.**—MATERIALS.—Broken stone, slag, tar-macadam, &c., for the C.C. D. H. Brown, County Surveyor, 8, Northgate-street, Warwick.

MARCH 4.—**Dover.**—MATERIALS.—Timber, &c., bricks, lime, &c., iron and steel, ironmongery, steam, water and gas tubing and fittings, &c., electrical sundries, electric cables, paints, &c., paint oils, spirits, tar, &c., Portland cement, for the Harbour Commissioners. Rutley Mowll, Registrar of Dover Harbour Board, Castle-street.

MARCH 4.—**Hemsworth.**—MATERIALS.—Broken whinstone, granite, limestone, slag, slag chippings, and tar-macadam, etc., for the R.D.C. W. T. Lynam, surveyor.

MARCH 4.—**Hendon.**—MATERIALS.—Broken granite, tarpaving material, tarviated granite, granite chippings, gravel, hoggin, and tar, for the R.D.C. H. W. Rackham, surveyor, Stanmore.

MARCH 4.—**Nottingham.**—MATERIALS.—Cement, blue lias lime, red bricks, blue bricks, timber, stoneware pipes, &c., stoneware pipes, &c. (patent joints), iron castings, iron gulleys, &c., Yorkshire flags, kerb, &c., granite setts, kerb and broken granite, ironstone slag, chippings, &c., river gravel, concrete sewer tubes, picks, shovels, scoops, &c., limestone chippings, refined tar, for the T.C. T. Wallis Gordon, City Engineer and surveyor. Deposit 5s. each.

MARCH 4.—**Thakeham.**—MATERIALS.—Granite, flints, and tar, for the R.D.C. W. Forrester, surveyor, Storrington, Pulborough.

MARCH 5.—**Rye.**—MATERIALS.—Stone, tarring grit, beach, and tar, for the R.D.C. R. E. Fuller, District Surveyor, Chitcombe-road, Brede.

MARCH 6.—**Clown.**—MATERIALS.—Broken granite and slag and clean chippings, tar macadam, for the R.D.C. J. T. Pears, surveyor.

MARCH 6.—**Denbighshire (Eastern Division).**—MATERIALS.—Road stone and chippings, tarred granite macadam, and tarred slag, distilled tar, &c., kerbing, for the C.C. E. W. Jones, County Surveyor, Roads and Bridges, Wrexham.

MARCH 6.—**East Grinstead.**—MATERIALS.—Broken granite, granite chippings, tar-macadam, ragstone, flints, and surface tarring, for the U.D.C. H. Campbell Golding, Acting Surveyor and Engineer.

MARCH 6.—**Hursley.**—MATERIALS.—Tar, bituminous dressing, &c., for the R.D.C. J. P. Game, surveyor.

MARCH 6.—**York.**—MATERIALS.—Stoneware pipes, stone flags, kerb, and edging, refined tar, building lime, slag (broken and unbroken), whinstone chippings, for the T.C. F. W. Spurr, City Engineer.

MARCH 8.—**Bognor.**—MATERIALS.—Concrete flags, kerbs, hardcore, tar, tarred slag, for the U.D.C. J. Draper, engineer and surveyor.

MARCH 8.—**Claypole.**—MATERIALS.—1,750 tons of granite, 1,500 tons of slag, 200 tons of footpath gravel, 1,500 tons of slag tar-macadam, and for tar-spraying about 100,000 sq. yds. of road, for the R.D.C. T. W. Mawer, District Surveyor, Brant Broughton, Newark.

MARCH 8.—**Derby.**—MATERIALS.—Bricks, cement and lime, earthenware, freestone, gritstone, &c., granite, &c., gravel, sand, &c., limestone, paints, oils, &c., tar, &c., slag, for the C.B. C. A. Clews, Borough Surveyor.

MARCH 8.—**East Lothian.**—MATERIALS.—Refined tar tar and bitumen compounds, road stones, tarmacadam, tarred chips, dry chips, and kerb; also tar spraying, quarrying, &c., for the C.C. G. Calvert, surveyor, Bank of Scotland Chambers, Haddington.

MARCH 8.—**Godstone.**—MATERIALS.—Road materials, including slag, granite, limestone and tar-macadam, tar, tar compounds, and surface treatment, liquids, Sevenoaks stone, tar grit, sand and ballast, and tar-spraying, for the R.D.C. G. E. Crowter, engineer and surveyor.

MARCH 8.—**Southwell.**—MATERIALS.—Road material for the R.D.C. R. Morris, Highway Surveyor, Eastthorpe.

MARCH 8.—**Stoke-on-Trent.**—MATERIALS.—Portland cement, blue paving bricks and common bricks, sanitary pipes and gullies, setts and kerbs, macadam, chippings and sand, refined tar, pitch and creosote oil, cast-iron work, picks, shovels and general iron work, paints and oils, for the T.C. City Surveyor.

MARCH 8.—**Tenterden.**—MATERIALS.—Granite or other approved macadam, Kent ragstone, road carriage, steam rolling, for the T.C. W. L. C. Turner, Borough Surveyor.

MARCH 8.—**Thingoe.**—GRANITE.—Broken granite, for the R.D.C. C. D. Bright, surveyor, 65, Churchgate-street, Bury St. Edmunds.

MARCH 9.—**Winchester.**—MATERIALS.—Gravel and sand, Portland cement, stoneware pipes, and cement paving slabs, for the T.C. W. V. Anderson, City Engineer.

MARCH 10.—**Hoo.**—MATERIALS.—550 tons of granite, 500 yds. of Kent rag, 1,800 yds. of flint, 300 yds. of hoggin, 1,200 yds. of pea grit, 30 yds. of sand, 23,500 galls. of tar, for the R.D.C. W. J. Stimpson, District Surveyor, Council Offices, Hoo, Rochester.

MARCH 10.—**London.**—MATERIALS.—Asphalte, patent or manufactured paving stone, broken granite, ballast, hoggin, shingle and sand, lime and cement, for the Shoreditch B.C. R. C. Ray, Deputy Town Clerk, Shoreditch Town Hall, Old-street, London, E.C. 2.

MARCH 10.—**Long Eaton.**—MATERIALS.—Tar macadam, granite, slag, gravel refined tar, cement, kerb (granite, York, and concrete), concrete slabs, common bricks, stoneware pipes, concrete pipes, cast iron pipes, for the U.D.C. H. Raven, C.E., surveyor.

MARCH 10.—**Shifnal and Blymhill.**—MATERIALS.—Granite, slag, and tar, for the R.D.C. C. H. Hines, surveyor, Market-square.

MARCH 11.—**Leek.**—MATERIALS.—Flags, kerbs, channels and setts, macadam stone and chippings, limestone and slag tarmacadam, Portland cement, sanitary pipes, pitch and oil, cast-iron manhole covers, galvanised malleable step irons, cast-iron gullies and frames, for the U.D.C. W. E. Beacham, engineer and surveyor.

MARCH 11.—**Peterborough.**—MATERIALS.—Paints, oils, &c., broken granite, cement, gravel and sand, for the T.C. City Engineer and Surveyor.

MARCH 11.—**Strood.**—MATERIALS.—Broken Guernsey and other granites, quartzite and basalt, Kentish ragstone, tarred Kentish ragstone, tarviated Kentish ragstone, tar, for the R.D.C. L. Raaderson, District Surveyor, Meopham, near Gravesend.

MARCH 11.—**Uxbridge.**—MATERIALS.—Tarmacadam, broken granite, flints, gravel, crushed shingle and hoggin, refined tar, for the R.D.C. E. E. T. Bolton, engineer and surveyor.

MARCH 12.—**Dublin.**—MATERIALS.—Building works and supplies, for the Commissioners of Public Works in the Dublin District. J. J. Healy, Secretary, Oifig Oibreach Puibli (Office of Public Works), Baile Atha Cliath. Deposit £1.

MARCH 13.—**Goole.**—MATERIALS.—Whinstone, slag, tarmacadam, refined tar, &c., for the R.D.C. R. Plewes, surveyor, 6, Belgravia.

MARCH 15.—**Ilkeston.**—MATERIALS.—300 tons broken granite (various sizes), 600 tons furnace slag (various sizes), 1,000 tons tarred macadam (various sizes), 500 yds. kerbs, 200 yds. super. concrete slabs, for the T.C. Borough Surveyor.

MARCH 15.—**Northamptonshire.**—MATERIALS.—Tarred macadam, broken granite, tar, surface dressing of various main roads in the county, for the C.C. E. A. Black, County Surveyor, County Hall, Northampton.

MARCH 17.—**Kettering.**—MATERIALS.—Granite slag, and tarred macadam, &c., for the repair of the highways, for the R.D.C. F. W. Stowe, Clerk.

MARCH 20.—**Burnley.**—MATERIALS.—Setts, flags (natural stone), flags (concrete), kerbs, channel, bricks (red), gravel, granite macadam, cement, pitch, creosote, earthenware pipes, ironwork (street grates, &c.), lime, limestone, &c., &c., for the C.B. A. Race, Borough Engineer and Surveyor.

MARCH 24.—**Wortley.**—MATERIALS.—Macadam, tar and pitch, kerbs, iron castings, sanitary pipes, for the R.D.C. F. Thurlby, engineer and surveyor, Grenoside, near Sheffield.

APRIL 6.—**Argentina.**—MATERIALS.—Sanitary ware for military barracks and hospitals, for the Commercial Secretary of the Ministry of War, Department of Overseas Trade, 35, Old Queen-street, London, S.W. 1.

NO DATE.—**Bishopthorpe.**—MATERIALS.—Best broken whinstone, 2 in. and 2½ in., also for 2 in. and 3 in. to 5 in. slag, and ¼ in. and ¾ in. slag and granite chippings, for the R.D.C. C. Cecil Lucas, Clerk to Council, 6, New-street, York.

NO DATE.—**Thrapston.**—MATERIALS.—Granite (broken, all grades), tar mac., slag, gravel, for the R.D.C. A. C. Bradbury, engineer and surveyor.

ENGINEERING, IRON AND STEEL.

MARCH 1.—**Scarborough.**—RESERVOIR.—Concrete Service Reservoir on Spring Hill, for the C.B. Dr. H. Lapworth, 25, Victoria-street, Westminster. Deposit £5.

MARCH 2.—**Brampton.**—PIPES.—187 tons of 3 in. cast-iron spigot and socket pipes, together with the necessary bends and other specials; also for excavating trenches and hauling, laying and jointing about 5 miles of 3 in. cast-iron pipes and the supply and fixing of sluice valves, air valves, washout valves, fire hydrants,

&c., the construction of a mass concrete reservoir with reinforced concrete roof, 30 ft. by 20 ft. by 8 ft. depth of water, in the parish of Cumwhitton, for the R.D.C. Taylor & Wallin, engineers, 47, Pilgrim-street, Newcastle-on-Tyne. Deposit £5.

MARCH 2.—**Dublin.**—TUNNEL.—Under the River Liffey, for the C.B. J. Murphy, Town Clerk Deposit £1 1s.

MARCH 2.—**Kenfig Hill.**—RESERVOIR.—Construction of a reinforced concrete service reservoir at Kenfig Hill, together with the necessary cast-iron pipes, valves and other fittings, for the Mid-Glamorgan Water Board. Thomas & Morgan & Partners, civil engineers, Pontypridd. Deposit £10 10s.

MARCH 3.—**Belper.**—BRIDGE.—Construction of a ferro-concrete bridge at Ford-lane, Allestree, near Derby, for the R.D.C. R. C. Cordon, surveyor.

MARCH 4.—**Abersoch.**—RESERVOIRS.—Construction of storage reservoir, pumping station, service reservoir, the provision and laying of about three miles of 4 in. and 3 in. diameter cast iron mains, and contingent works at Abersoch, Carnarvonshire, for the Water Supply Co. S. B. Wilmot and A. H. S. Waters, engineers, 63, Temple Row, Birmingham. Deposit £1 1s.

MARCH 6.—**Balderstone.**—WIDENING.—Of the Spade Bridge, for the Lancashire C.C. W. H. Schofield, County Surveyor and Bridgemaster, County Offices, Preston.

MARCH 6.—**Poulton-with-Fearnhead.**—WIDENING.—Reconstruction and widening of the Bruch bridge on the Warrington-to-Manchester road, for the Lancashire C.C. W. H. Schofield, A.M.Inst.C.E., County Surveyor and Bridgemaster, County Offices, Preston.

MARCH 6.—**Truro.**—CULVERT.—Construction of about 190 ft. of reinforced concrete culvert, 20 ft. wide, together with retaining walls, sluice gates, and road and sewer works, for the T.C. F. A. Barnes, City Surveyor. Deposit £2.

MARCH 9.—**Edinburgh.**—RAILS.—1,200 tons of steel tramway rails, for the T.C. Tramways Manager, 2, St. James's-square.

MARCH 15.—**Grimsby.**—BRIDGE.—Lifting bridge over the Alexandra Dock at Grimsby, about 45 ft. span and 50 ft. in width, together with 240 lineal feet of viaduct 50 ft. in width, for the C.B. H. Gilbert Whyatt, Borough Engineer. Deposit £10 10s.

MARCH 15.—**Stockport.**—EXTENSIONS.—Construction of screening chambers, pump-house, detritus tanks, and other appurtenant works, including mechanical equipment, at the Stockport Sewage Works, Cheadle Heath, for the C.B. H. Hamer, Borough Surveyor. Deposit £5 5s.

MARCH 17.—**Blything.**—MAIN.—Supplying and laying a 6 in. steel main across the tidal river Blyth, at Southwold Harbour, and for supplying, laying and fixing 4 in., 3 in. and 2 in. cast-iron water mains, valves and hydrants for the works of water supply in the parish of Walberswick, for the R.D.C. J. Mackworth Wood, consulting engineer. Deposit £5 5s.

ROAD, SEWERAGE, AND WATER WORKS.

MARCH 1.—**Beckenham.**—WIDENING.—Of South Eden Park-road, for the U.D.C. J. A. Angell, Surveyor. Deposit £2.

MARCH 1.—**Doncaster.**—SEWERAGE.—Construction of additional sludge lagoons at the Sandall Purification Works, for the T.C. F. Oscar Kirby, Borough Engineer, 2, Priory-place.

MARCH 1.—**Down.**—RECONSTRUCTION.—Reconstruction Lisburn, Hillsborough road, and reconstruction of portions of Belfas-Comber road, for the C.C. J. G. Wilkin, County Surveyor, Courthouse, Downpatrick.

MARCH 1.—**Hertfordshire.**—TARRING.—Surface tarring approximately 3,000,000 sq. yds. of main roads with refined tar or bituminous compounds, for the C.C. Lieut.-Col. A. E. Prescott, County Surveyor, County Surveyor's Office, Hatfield.

MARCH 1.—**Kilkenny.**—PIPE.—Provision, laying, and jointing of a 9 in. internal diameter cast iron pipe line of a total length of about 10,000 yd. from the Impounding Reservoir at Muckalee to the Service Reservoir at Radestown, together with a short length of 12 in. diameter cast iron pipe, intake works, sluice valves, air valves, and cross-connection, for the U.D.C. Pierce F. Purcell, consulting engineer, Ashton, Killiney, co. Dublin. Deposit £3.

MARCH 1.—**Tynemouth.**—REPAIRS.—Street works as follows: Concrete carriageways and footpaths and tar macadam carriageways upon the Balkwell estate, for the T.C. J. F. Smillie, Borough Surveyor.

MARCH 2.—**Gowerton.**—LEVELLING.—Levelling recreation ground at Gowerton Intermediate School, for the Glamorgan C.C. Henry D. Rowland, Assistant Secretary of E.C., Glamorgan County Hall, Cardiff.

MARCH 2.—**Leatherhead.**—SEWER.—Laying of about 410 yds. of 9 in. stoneware sewer in Downs-lane, for the U.D.C. S. R. Drake, Town Surveyor. Deposit £1 1s.

MARCH 2.—**West Kilbride.**—ROAD.—By-pass road from the station to Hunterston-road, for the Ayr C.C. Rod. M'Donald, Surveyor, District Offices, Kilwinning. Deposit £1 1s.

MARCH 3.—**Cheadle and Gatley.**—SEWER.—Construction of 1,693 yds. of 12 in. sewer and 2,643 yds. of 9 in. sewer, with necessary manholes, flushing chambers, ventilating shafts, &c., for the U.D.C. R. Hewson Molyneux. Deposit £2 2s.

MARCH 3.—**Glamorganshire.**—ROAD.—Construction of a new road, approximately two miles in length, commencing at its junction with the new road from Cwmparc to Nantymoel now under construction at Bwich-y-Clawdd and extending along the top of the mountain to a point near Crug-yr-Avan, and terminating by a junction with the new road from Abergwynfi now under construction, for the C.C. W. E. R. Allen, Deputy Clerk of the C.C., Glamorgan County Hall, Cardiff.

MARCH 3.—**Hove.**—MAKING-UP.—Making up roadway, laying new paving, and other works in connection therewith in Boundary-road, between Hallyburton-road and Old Shoreham-road, for the T.C. Borough Surveyor.

MARCH 3.—**Paignton.**—MAIN.—Laying of a 15 in. diameter cast iron main, with contingent and subsidiary works, from the Council's Works on Dartmoor to Park Hill Cross, a distance of 12¼ miles, for the U.D.C. F. W. Vanstone & Sons, engineers, Torbay Chambers. Deposit £3 3s.

MARCH 3.—**Pitsligo.**—EXTENSION.—Mason work, railing and gate, and laying out of ground, in connection with the extension of the churchyard, for the P.C. M. H. Prangnell.

MARCH 4.—**Hendon.**—ROADS.—For (1) Headstone-lane, Pinner.—Reconstruction of road and formation of footways, new surface water sewer, &c., approximately 10,000 yards super of 6 in. reinforced concrete carriageway, 3,000 yards lineal kerb, 1,500 yards 12 in. and 9 in. surface drains, gullies, manholes, &c. (2) Edgwarebury-lane, Edgware.—Reconstruction of road and formation of footways, new surface water sewer, &c., approximately 6,100 yards super 6 in. reinforced concrete carriageway, 1,700 yards lineal kerb, 1,350 yards lineal 12 in. and 9 in. surface water drains, gullies, manholes, &c., for the R.D.C. H. W. Rackham, Engineer and Surveyor, Council Offices, Stanmore, Deposit £3 3s.

MARCH 4.—**London.**—PAVING.—Cricklade-avenue (part), Streatham, Frewin-road and Herondale-avenue, Wandsworth, for the Wandsworth B.C. E. J. Elford, Borough Engineer, 215, Balham High-road, S.W. 17. Deposit £1 1s.

MARCH 4.—**Romney Marsh.**—MAINS.—Laying of about 6,000 yards of water mains between Jesson-lane and Dymchurch, for the R.D.C. W. Lamacraft, Clerk to the Council, Town Hall, New Romney.

MARCH 4.—**Rothwell.**—PIPES.—170 yds. 6 in. concrete, or hydro-carbon lined cast-iron or spun pipes, 386 yds. 4 in. lined ditto, ditto, for the U.D.C. G. F. Moorhouse, Clerk.

MARCH 4.—**Southend-on-Sea.**—MAKING-UP.—Of Crosby-road, Durham-road, Herschell-road, and St. Clement's-avenue, and incidental works in connection thereto, for the C.B. R. H. Dyer, Borough Engineer and Surveyor. Deposit £2 each.

MARCH 5.—**Inverness.**—ROAD.—Construction, reconstruction and surfacing from Findhorn bridge to Aviemore, a length of approximately 14 miles, for the C.C. The Chief Engineer, 98-104, Academy-street, Inverness. Deposit £3 3s.

MARCH 5.—**Leicestershire.**—RECONSTRUCTION.—Of main roads in bituminous materials and reinforced concrete, for the C.C. J. E. Blackwall, County Surveyor, Grey Friars, Leicester.

MARCH 5.—**London.**—PIPES.—190 lin. ft. of 30 in. diameter mild steel pipes and bends, &c., on Chancellor's Wharf, and a steel pipe connection to the existing 4 ft. 6 in. by 3 ft. condenser water discharge culvert, in the Approach-road, to the Electricity Works, Fulham Palace-road, for the Hammersmith B.C. R. Hampton Clucas, Borough Engineer and Surveyor.

MARCH 6.—**Garstang.**—ROAD.—By-pass road between Pump-street and Kirkland Bridge and Kettle-lane and Carr House Farm, for the Lancashire C.C W. H. Schofield, County Offices, Preston.

MARCH 6.—**Halifax.**—SEWERING.—Sewering, kerbing, macadamising, building of retaining and fence walls and appurtenant work required in the widening and improvement of Rookes-lane, Norwood Green, for the R.D.C. F. Gordon, Surveyor, Clifton, Brighouse.

MARCH 6.—**London.**—CEMETERY.—The Paddington B.C. invite offers of between 35 and 40 acres of land suitable for the purposes of a cemetery. W. F. Abbiss, Town Clerk, Town Hall, Paddington, W.2.

MARCH 6.—**Stainburn.**—WIDENING.—Removal of a cottage and the widening of the road in Stainburn Village for a length of 80 yds., for the Cumberland C.C. G. O. Lockwood, A.M.Inst.C.E., County Surveyor, The Courts, Carlisle. Deposit £1.

MARCH 8.—**Skegby.**—SEWER.—Construction of about 4,500 lineal yards of 8 in., 9 in., 12 in. and 15 in. stoneware pipe sewers; the construction of manholes, ventilators, flushing tanks, detritus tanks, settling tanks, storm water tanks, percolating filters, mud draining beds, and laying out sewage disposal works and other appurtenant works, at Blidworth, for the R.D.C. W. Preat, Chartered Civil Engineer, Bank-street-chambers, Bradford. Deposit £5.

MARCH 8.—**Workington.**—DRAINAGE.—Of fifty houses, for the T.C. H. B. Williams, Borough Engineer and Surveyor.

MARCH 9.—**Doncaster.**—SEWERAGE.—For 5 ft. diameter sewer, storm overflow bays, inlet channel, screening chambers and screen house, detritus tanks, new pumping station sub-structure and super-structure, storm-water tanks, sludge lagoons, culverts, 18 in. cast-iron rising main, three cottages, roads, fencing, &c., and 3,138 lin. yds. of egg-shaped sewers varying from 5 ft. 6 in. by 3 ft. 8 in. to 3 ft. by 2 ft., and 4,193 lin. yds. of sewers varying in diameter from 21 in. to 9 in., and 1,273 lin. yds. of circular sewer, varying from 27 in. to 12 in. diameter, for the T.C. F. Oscar Kirby, Borough Engineer, 2, Priory-place. Deposit £5 5s.

MARCH 9.—**Southgate.**—MAKING-UP.—Of sections (from Green-lanes to Fairbrook-road) of (*a*) Grenoble-gardens, (*b*) Upsdell-avenue, (*c*) Berkshire-gardens, all in Palmer's Green, for the U.D.C. R. Phillips, surveyor.

MARCH 9.—**Southgate.**—SEWER.—Construction of a foul sewer consisting of about 197 yds. lin. 9 in. diameter stoneware pipes, and for a surface water sewer consisting of about 117 yds. lin. 12 in. diameter and 457 yds. lin. 9 in. diameter stoneware pipes, with necessary manholes, &c., in Wades-hill, Winchmore-hill, for the U.D.C. R. Phillips, surveyor.

MARCH 11.—**London.**—SEWER.—Construction of about 410 ft. of 4 ft. × 2 ft. 8 in. brick sewer beneath Paper-street, and the re-inverting of about 100 ft. of brick sewer in Whitecross-street, and contingent works, for the Corporation. City Engineer, Guildhall, E.C. 2. Deposit £2 2s.

MARCH 12.—**Uxbridge.**—SEWERAGE.—New sewage disposal works, comprising storage tank and pump house, Dortmund settling tanks, percolating bacterial filter beds, humus tanks, mud drying beds, and other sundry works; 8,650 yds. of stoneware and iron pipe sewers (9 in., 12 in., 15 in., 18 in., 21 in., and 24 in.), together with manholes and all appurtenant works; and 7,000 yds. of stoneware and iron pipe sewers (8 in., 9 in., 12 in., and 15 in., mostly 15 in.), together with manholes and all appurtenant works, and erection of storage tank and pump house, for the R.D.C. W. H. Radford & Son, chartered civil engineers, Albion-chambers, King-street, Nottingham. Deposit £3 3s.

MARCH 13.—**Millom.**—WIDENING.—The Whitehaven to Barrow main road, near Millom, for the Cumberland C.C. G. O. Lockwood, Chartered Civil Engineer, County Surveyor and Bridge Master, The Courts Carlisle. Deposit £2.

MARCH 15.—**Whitstable.**—MAINS.—Excavating trenches, &c., and supplying and laying about 9 miles of iron water mains, from 3 in. to 9 in. diameter, with all necessary fittings, for the U.D.C. J. Dunn, surveyor and water engineer. Deposit £2 2s.

NO DATE.—**Shoreham-by-Sea.**—SEWERAGE.—Main sewerage for Shoreham Bungalow Town, for the U.D.C. D. Balfour & Son, civil engineers, 5, Mitre-court Chambers, Temple, London, E.C.4. Deposit £5.

Competitions.

(*See Competition News page* 350.)

Auction Sales, Tenders, etc.

MARCH 2 AND FOLLOWING DAYS.—**Hoddesdon, Herts.**—Charles R. Davis & Co. will sell, by order of John Alfred Hunt (Hoddesdon), Ltd., who are ceasing to carry out any further large contracts from Hoddesdon, at the yards and workshops, Brockett-road, three days' unreserved sale of the whole of the builders', contractors', and decorators' stock-in-trade, plant and machinery. Auctioneers, 285, Borough High-street, London, S.E.1.

MARCH 2.—**London.**—Joseph Hibbard & Sons will sell, without reserve, by order of Messrs. A. J. Smith & Co. (who are removing to Cudworth-street, Bethnal Green), upon the premises, 532 to 534, Arnold-road (close to Bow Station), stock and plant of timber merchants. Auctioneers, Newington Green, Islington, London, N.16.

MARCH 3.—**Foot's Cray, Kent.**—Veryard & Yates will sell, without reserve (near "Black Horse," Sidcup), at Mr. Readhead's Farm, Mount Culver, useful timber and building materials. Auctioneers, 365, Norwood-road, S.E.27.

MARCH 3.—**Twickenham.**—Nightingale, Page & Bennett, in conjunction with John D. Wood & Co., will sell, on the premises, Orleans House, fitments of this historical mansion, handsome Georgian return staircase in oak, &c. Auctioneers, N. P. & B., Eagle Chambers, Kingston-upon-Thames and Claremont House, Surbiton, and J. D. W & Co., 6, Mount-street, W.1.

★MARCH 4.—**London.**—Messrs. H. W. Smith & Moon will sell, at 6, Treverton-street, Notting Hill, builders' and decorators' stock and plant; also the lease of yard and workshops belonging to Messrs. Antill, Ltd., in voluntary liquidation. Auctioneers, Great James street, Bedford-row, W.C.1.

MARCH 5.—**Norwich.**—Messrs. Spelman have received instructions from the executors of the late Mr. E. W. D. Potter to sell, at the "Royal Oak," Norwich, in lots: (1) Freehold property, stonemason's yard, with office and house, as a going concern; (2) stabling; and (3) house and gardens. Auctioneers, Norwich and Great Yarmouth.

MARCH 9. — **London.** — W. W. Howard Bros. & Co., in conjunction with Joseph Hibbard & Sons. Public sale will take place by order of the Government of Burma, in the Small Hall, Winchester House, Old Broad-street, London, E.C.2, without reserve, of stock of Burma hardwoods laying at Crown Wharf, Canning Town, London, E., and Tower Wharf, Southampton. Auctioneers, 16, Newington Green, Islington, London, N.16.

MARCH 10. — **Middlesex.** — Garrett, White & Poland will sell at the London Auction Mart, 155, Queen Victoria-street, E.C., freehold building land of about 50 acres, with over 5,000 ft. of road frontage, together with five cottages. Auctioneers, 17, Hanover-street, W., and 42, Poultry, E.C.

*MARCH 16. — **New Malden.** — Joseph Hibbard & Sons will sell, without reserve, by order of Mr. George Blay, who has disposed of the freehold upon the premises, "Malden Works," Wellington-crescent, New Malden, large quantities of new plant and stores. Auctioneers, 15, Newington Green, Islington, London, N.16.

*NO DATE.—**Bucks.**—Knight, Frank & Rutley will sell (unless previously sold privately), by direction of Capt. J. Bell White, C.B.E., R.N.R., J.P., the freehold residential, sporting and agricultural estate, Alderbourne Manor; also Alderbourne Farm and building sites. The whole extends 414 acres. To be sold as a whole, in blocks, or lots. Auctioneers, 20, Hanover-square, W.1.

Public Appointments.

MARCH 1. — **Cheshire.** — Deputy County Architect required in the County Architect's Department by the C.C. H. Beswick, F.R.I.B.A., County Architect, Newgate-street, Chester.

MARCH 1.—**Margate.**—Clerk of Works required in connection with erection of 72 non-parlour type houses, for the Borough of Margate. Edward Brooke, Town Clerk, 13, Grosvenor-place, Margate.

MARCH 2. — **Durham.** — Building Inspector and Clerk of Works in the County Engineer, Surveyor and Architect's Department required by the County Council. William J. Merrett, County Engineer, Surveyor and Architect, 43, Old Elvet, Durham.

*MARCH 3. — **Tottenham.** — Clerk of Works required by the District Council. Preference will be given to candidates who have had previous experience in housing schemes. Reginald C. Graves, Clerk and Solicitor of the Council, Town Hall, Tottenham, N.15, endorsed "Appointment of Clerk of Works."

*MARCH 4. — **London.** — Clerk of Works to supervise the erection of houses on the Central site, East Ham, required by the Corporation. C. Eustace Wilson, Town Clerk, Town Hall, East Ham, E.6.

*MARCH 10.—**Smethwick.**—Clerk of Works required by the Smethwick C.B. in connection with Housing Scheme work. Ronald Fletcher, Borough Engineer and Surveyor, Council House, Smethwick.

*NO DATE. — **London.** — Clerk of Works for temporary engagements in the Architect's Department required by the London County Council. Architect to the Council, The County Hall, Westminster Bridge, S.E.1.

*NO DATE.—**Sudan.**—QUANTITY SURVEYOR.—Qualified to take out quantities engineering work required by the Sudan Government. Advisory Engineer, Sudan Government, London Office, Wellington House, Buckingham-gate, S.W.1, marking envelope "Quantity Surveyor."

*NO DATE.—**Worcester.**—ARCHITECTURAL ASSISTANT.—Temporary architectural assistant with a special experience of school work required by the Corporation. City Surveyor, Guildhall, Worcester.

PRICES AND WAGES

In the House of Commons Mr Chamberlain informed Mr. Paling that the prices of houses included in contracts let by local authorities during December last showed an increase of £20 in the case of non-parlour houses and £2 in the case of parlour houses over the prices for July, 1924. The increases in operatives' wages during this period represented an increased cost per house of from £4 5s. to £5 outside London and from £12 15s. to £15 in the case of London.

Mr. Forrest asked the Minister if, in view of his announcement that the cost of both parlour and non-parlour houses had increased by approximately 100 per cent. in two years, he could state the causes of this increase and the percentages for which they were individually responsible.

Mr. N. Chamberlain said he had made no announcement such as was suggested in the question. The prices of houses included in contracts let by local authorities during the last three months of 1925 showed an increase of just over 11 per cent. as compared with the prices ruling during the corresponding period two years earlier. Of this increase a rise in wages accounted for from 2½ per cent. to 5 per cent., according to district, and increases in the prices of materials accounted for about 4 per cent.

PROPOSED NEW BUILDINGS & OTHER WORKS*

IN these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; B.G. for Board of Guardians; B.C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; B.E. for Board of Education; M.A.B. for Metropolitan Asylums Board; and M.W.B. for Metropolitan Water Board.

ALDERSHOT.—The Surveyor is considering the provision of a new entrance to the ladies' convenience at the Recreation Ground.—The Council are proposing the reconstruction of sewerage works.

BANGOR.—The U.D.C. passed plans for a scheme of 16 ex-Servicemen's houses, to be erected by the Board of Works.

BARNSLEY.—The Maternity and Child Welfare Committee have inspected five sites for the purposes of an Infant Welfare Centre, and have recommended that the Town Clerk be instructed to obtain offers for a site in Racecommon-road and for a site in Pitt-street.—The Housing Committee recommend that the offer of A. Jones to sell 25,373 acres of land in Pontefract-road be accepted.—The Markets and Fairs Committee has further considered the question of the conversion of the upper portion of the Corn Exchange into offices.—The new Town Hall Committee has considered the question of the land required to complete the site for the Town Hall, and recommended to the Purchase of Property Committee that an offer be made to the Barnsley Brewery Co., Ltd., for the land and premises belonging to them, and forming part of the new Town Hall site.

BATH.—The T.C. has approved the plans, estimates and report prepared by the City Engineer, for the following improvements in the Royal Victoria Park: (*a*) The conversion of the Park Farm House into two lodges; the conversion of the outbuildings into greenhouses, with proper heating apparatus; and the removal of the existing glass houses, &c., to new positions; the estimated cost of the foregoing is £1,900; (*b*) erection of an additional forcing house, together with twelve cold frames, at an estimated cost of £725; (*c*) construction of a sanitary convenience on Middle Common, at an estimated cost of £800; and (*d*) construction of a model yacht pond near the north-east side of the lake, at an estimated cost of £300.—Application is to be made to the M.H. for sanction to borrow the before-mentioned sums.—The T.C. has resolved that a strip of land abutting on Charlcombe-lane be handed over to the Housing Committee for the purpose of the erection of dwelling houses, and the Housing Committee be requested to fence off the land.—The City Engineer submitted the plans showing the proposals for converting the Blue Coat School and the provisions for office accommodation for the Medical Officer of Health and his department, which the Sub-Committee approved.—The Town Clerk reported upon an offer to sell to the Corporation certain land adjoining Southdown-road, and the T.C. resolved that the Council be recommended to purchase the land for the erection of houses, at the price of £1,500.

BIRMINGHAM.—The Public Entertainments Committee of the Birmingham Justices have approved an application by Mr. Harold Goldie Witcombe for permission to build a picture house in Stratford-road, Hall Green. The building when complete will cost £25,000.

BISHOP'S STORTFORD.—The U.D.C. is to make application to the M.H. for sanction to erect 28 houses on the Dunmow-road estate instead of 20 as sanctioned at first.

BLACKPOOL.—The C.B. resolved that two tramway passenger shelters be provided on the Promenade route, one opposite Waterloo-road, and one opposite either Alexandra-road or St. Chad's-place.—The Borough Electrical Engineer has purchased a site in respect of the sub-station at Anchorsholme.—Plans passed: Eleven houses, Coleridge-road, for Coleridge Estate Syndicate.

BLYTH.—The Borough Engineer reported that the reservoir should be constructed on a site further north than that previously suggested, and the C.B. has recommended the formation of a sub-committee in reference to the site.—The Council has recommended that in the event of the site of the Albion brick yard being acquired by the Corporation, that same be used for the purposes of a town depot and refuse destructor.—Plans passed: Power station, near Newsham Station, for the Northern Counties Electricity Supply Co., Ltd., and six houses in Newsham-road.

BOOTLE.—The E.C. propose the provision of a new secondary school for boys with 451 places on a site at the corner of Stanley-road and Balliol-road.

BOSWORTH.—The Market Bosworth R.D.C. has decided to apply to the M.H. to sanction a loan of £4,000 for housing purposes.—Plans passed: Twenty-three houses at Groby, three at Ratby, and one each at Ibstock, Market Bosworth, Newbold Verdon, and Markfield.

BRADFORD.—Plans of a proposed new secondary school, to accommodate 600 pupils, at an estimated cost of £76,000, has been approved by the Secondary Education Sub-Committee.—The B.E. has intimated their sanction of the scheme for the granting by the Bradford Corporation of a lease for the building of a new Bradford Grammar School on part of the Clock-house estate.

BRIDLINGTON.—The B.E. is insisting upon the E.C. erecting new schools in Hilderthorpe Ward, and the estimated cost is £10,000. The recommendation as to the erection of a "double-decker" school, to plans prepared by the Borough Surveyor, Mr. A. P. Horsley, will be considered at the next meeting.

BURGESS HILL.—The M.H. has held an inquiry into the application of the U.D.C. to sanction the borrowing of £8,338 to carry out improvements in the method of the town's sewage disposal.

CASTLEFORD.—The Bank of Liverpool & Martins, Ltd., proposes to erect new banking premises. Messrs. Blenkinsopp & Scatcherd, architects, Midland Bank Chambers, Bank-street, Castleford, have been instructed to prepare the necessary plans, and tenders are to be invited.

COPSEWOOD.—The Warwickshire E.C. are considering the provision of elementary school accommodation.

COVENTRY.—The T.C. passed plans: Sixteen houses, Walsgrave-road, for W. Morris; fourteen houses, Victory-road, for T. Randle.

DAGENHAM.—The Essex E.C. has acquired sites for the erection of a school clinic and an intermediate school.

DERBY.—The Corporation has decided to apply to the Ministry of Home Affairs for sanction to a loan of £23,170 for street improvement works on classified roads, and £5,000 for grants to persons constructing houses.

DUNMOW.—The Essex E.C. are to proceed with the erection of an elementary school at Great Dunmow, in place of existing premises which are to be adapted as a centre.

FOLES HILL.—The Warwickshire E.C. has completed the purchase of a site at Bell Green for the erection of an elementary school. Accommodation is to be provided for 420 children.

FRIERN BARNET.—The M.H. has approved the U.D.C.'s scheme for the erection of 100 more houses.—The Council has also decided that tenders be invited for the construction of a new fire station.

HASLEMERE.—The U.D.C. has undertaken to build 24 more houses.

HELSBY.—The Mersey Power Co., Ltd., are seeking consent from the Cheshire C.C. for a scheme for the erection of a power station.

HESTON.—The U.D.C. passed plans for W. J. Harris, for 24 houses off Martindale-road.

HITCHIN.—The Housing Committee has approved the report of Mr. Bowers (of Messrs. Culpin & Bowers, town planners), in connection with the draft block and elevation plans for the West Mill-lane site housing scheme.

HURLEY.—A site is being acquired by the Warwickshire E.C. for the erection of a handicraft and cookery centre.

LEEDS.—Mr. B. Whitaker, builder, has acquired an estate, 5½ acres in extent, on the north side of Stainbeck-lane. It is proposed to erect 50 houses, in accordance with plans prepared by Mr. G. W. Atkinson, architect, 1, Mark-lane, Leeds.

LITTLEHAMPTON.—To preserve the river as a drainage outlet, the West Sussex C.C. recommend the reconstruction of the western pier of Littlehampton Harbour, at a cost roughly estimated at a minimum of £50,000.—The U.D.C. has approved plans for the construction of a shelter and refreshment kiosk, for which tenders will shortly be invited.

LONDON.—The Westminster City Council recommend the formation of vaults in Exeter-street, for the Strand Palace Hotel, as shown on the amended drawing submitted by Mr. Wills in respect of the construction of subways under streets.—The M.H. has held an inquiry into the application of the Council for sanction to borrow in respect of the proposed rebuilding of the Marshall-street Baths and Washhouses.—The Council recommend no objection to the formation of footway and increased carriage-way in Johnson-street and Hinchcliffe-street, at the proposed ice-skating rink at the corner of those streets, in accordance with the plan submitted.—The City Engineer has submitted an estimate of £80,418 for road repairs, &c.

LONDON (BATTERSEA).—The B.C. recommend that, subject to the sanction of the M.H. and of the L.C.C. to the necessary loan, the Council do purchase the Southlands property for the Housing, Maternity, and Child Welfare, Tuberculosis, Baths, and Wash houses, and Library, and for general purposes, at a sum not exceeding £25,000.

LONDON (DEPTFORD).—The B.C. recommend the approval of the purchase of the leasehold interest of 15, Laurie-grove with the chapel and land in rear thereof, for the sum of £850, for the proposed construction of a ladies' swimming bath.—The Council recommend the provision of a residential flat for the Superintendent of the Clyde-street and Evelyn-street Baths on the Clyde-street frontage.

LONDON (DOWNHAM).—The L.C.C. propose the expenditure of £147,750 for the erection of 241 houses

LONDON (KENSINGTON).—The B.C. recommend that Mr. A. B. Knapp-Fisher, F.R.I.B.A., be commissioned to prepare the necessary plans, specifications, &c., required, to advise the Council in regard to works that might be carried out by direct labour, for the laying out of the land at Gunnersbury, purchased for the purposes of a new cemetery.—The Council has considered a report by the Chief Librarian relative to the adoption of the open access method at the North Kensington Branch Library.

LONDON (LEWISHAM).—The B.C. are to acquire compulsorily 43 acres of land at Grove Park for housing purposes.

* See also our **List of Contracts, Competitions, etc.**

LOUGHBOROUGH.—The Housing and Town-Planning Committee has decided to recommend a scheme for the erection of 200 more houses.

LOWESTOFT.—The T.C. propose to approve a scheme submitted by the Borough Surveyor for the improvement of the Battery Green by the construction of a car parking place to provide accommodation for about 100 cars. The foundation and drainage in connection with this will cost about £700. The remainder of the green could be plotted and let on building leases to provide office and stores accommodation.—Sanction has been received from the M.H. to the borrowing of £1,850 for the construction of four groynes on the North Beach.—The T.C. are proposing the establishment of a branch library at Oulton Broad and a children's branch at the Public Library.—The E.C. has had before them the plans approved by the Joint Higher E.C. for the erection of a new secondary school for girls in St. Margaret's-road.—Applications are to be made to the M.H. for loans for housing purposes.

LUTON.—The Borough Engineer is to submit estimates for painting and decorating the interior of the library.—Tenders are to be invited for the erection of the superstructure of the boiler-house at the pumping station.—Mr. C. W. Latter has been engaged to prepare the bills of quantities for the proposed Ward Block at the Hospital.

MARKFIELD.—The Leicestershire C.C. propose that the Isolation Hospitals Committee should erect in conjunction with a hospital to be established by the C.C. for the treatment of phthisis, an isolation hospital under the Leicestershire Isolation Hospitals Order.

MEPAL.—The Isle of Ely C.C. are to discuss with the M.T. a proposal for the reconstruction of the bridge over the Hundredfoot river.

MERROW.—A large residence is to be erected for occupation by J. St. L. Strachey. Mr. C. Williams-Ellis, F.R.I.B.A., architect, 22, Ebury-street, Westminster, S.W.1. S. Ellis, builder, Chertsey-road, Guildford.

MORECAMBE.—The Corporation are proposing to carry out several improvement schemes, nearly all of which are in accordance with plans and specifications prepared by the Borough Surveyor. The first of the schemes provides for the erection of 127 houses on the South Grove estate, off Lancaster-road, and tenders are now being invited. Another scheme shortly to be begun comprises the construction of two bowling greens, sixteen hard tennis courts, two putting greens, lavatories, shelter, &c., at an estimated cost of £19,575.

MORETON.—Sanction has been obtained by the Cheshire E.C. to borrow £15,000 for the erection of a school.

NEWCASTLE-ON-TYNE.—Messrs. A. Arroll & Sons, Ltd., brewers, West Blandford-street, propose to pull down the present "Phœnix" Hotel in Newgate-street and to erect an entirely new building to plans prepared by Eedle & Myers, architects, of Railway-approach, London Bridge, S.E. 1.

NEW FERRY.—Cheshire E.C. are seeking sanction to borrow £23,000 for the erection of an elementary school at Grove-street.

NEWQUAY.—A public inquiry has been held by the M.H. relative to the proposed improvements on the sea-front by the construction of a winter garden and promenades.

NEWTON ABBOT.—Station improvements at Newton Abbot in the immediate future are to be made at an estimated further cost of £67,000, by the G.W.R.

OSSETT.—The erection of a big water tower of reinforced concrete has been included by the Corporation in their 1926 programme. The tower will be 137 ft. 6 in. in height with a 200,000 gallon capacity.

OSTERLEY.—It is proposed to build a new hotel on a site on the Great West-road at Isleworth. Messrs. Eedle & Myers, architects, 8, Railway-approach, London Bridge, S.E.1.

OUGHTRINGTON.—The Cheshire E.C. are to carry out improvements and heating at the elementary school, at a cost of £400.

OXFORD.—The Visiting Committee has under consideration the desirability of the provision of a separate residence for the Senior Medical Officer, and have decided to request the consent of the C.C. and of the Corporation to the erection of a house in the Hospital grounds. Plans have been prepared, and the scheme is estimated to cost about £2,000.—The T.C. recommend that plans be approved and tenders be invited for the erection of the urinal in Paradise-street. The Deputy City Engineer estimated the cost of erection at £425.—The Trustees of the Sawyer Estate have accepted the Corporation's offer to purchase Summertown Farm at the price of £22,000 and costs.

PAIGNTON.—The U.D.C. has offered a site on the Preston estate to the District Hospital Committee for the erection of a hospital—The M.H. has sanctioned the proposal for the erection of 36 houses on the Preston estate.

PENRITH.—A scheme is to be prepared for the erection of 34 houses on the Fair Hill estate.

PLYMOUTH.—Developments of some importance are to be carried out shortly in the port of Plymouth, where the Victoria wharves, controlled by Messrs. Coast Lines, Ltd., are to be extended.

PRICKWILLOW.—The Isle of Ely C.C. has obtained a site at Prickwillow for the erection of a police house.

READING.—The M.H. has held an inquiry into the application of the T.C. for permission to borrow £16,900 for the fencing and laying-out of the new cemetery at Caversham, and for the erection of a superintendent's lodge and other buildings.—The Reading Old Blues' Association has inaugurated a scheme to provide a new dining hall, the estimated cost of which is £1,500, at the school.

REASEHEATH.—Estimates prepared by the Cheshire County Agricultural Committee provide for a women's hostel, farm buildings, &c., at a total cost of £33,000.

RIVINGTON.—The governors of the Rivington and Blackrod Grammar School are proposing to make additions to their buildings. The plans are being prepared by the County Architect, H. Littler, of 16, Ribblesdale-place, Preston.

ROMFORD.—Lloyds Bank, Ltd., are to reconstruct their bank premises at the corner of Market-place and North-street.

ROTHWELL.—The Council proposes to erect 40 scullery houses at Rothwell Haigh and 36 scullery houses at Lofthouse. The estimated cost of the 76 houses is £32,910.—Negotiations are proceeding between the Sanitary Committee and the West Riding C.C. respecting the provision of a tubercular dispensary at Rothwell. A site at Dodge Croft has been approved.

ST. HELENS.—The E.C. propose (1) The erection of a new school at Parr; (2) the acquisition of the Sutton Manor School; (3) the establishment of the Mining School at the Marshall's Garage; (4) the erection of the new Cowley secondary school; and (5) to build an open-air school.

SALE.—Land has been acquired by the Cheshire E.C. for the extension of the school for girls.

SANDERSTEAD.—Mr. J. Warren, builder, is to build a number of residences in Lower-avenue, and plans have been prepared for forty-four with garages adjoining.

SCARBOROUGH.—The Corporation has in committee decided to proceed with the erection of a free library without any immediate prospect of assistance from the Carnegie Trust.—The Scarborough Whitley Breweries, Ltd., are proposing to make the North Riding Hotel a first-class modern hotel by incorporating the adjoining premises. The plans are being prepared by H. Fawcett, 3, York-place.

SHEFFIELD.—The vicar, the Rev. L. B. W. Heptonstall, of St. Alban's, Darnall, proposes to erect a new church.—To celebrate the centenary of the Attercliffe Parish Church, it is proposed to erect a church institute.—A new Roman Catholic elementary school and public hall are to be erected at Lane Tops, for the Rev. Father White. The architects are Holton & Fox, Corporation-street, Dewsbury.

SIDCUP.—Extensions are to be made to the children's homes for the Greenwich B.G. Messrs. Woodhams, Ltd., builders, 141, Mason's-hill, Bromley, Kent. A. Roberts, F.R.I.B.A., architect, 92, London-road, Greenwich, S.E. 10.

SOUTHEND-ON-SEA.—The C.B. passed plans for various works, including eight houses, Olivia-drive, for A. W. Goodhew, and shop, South-avenue, and nine shops, Sutton-road, for R. H. Procktor.

SOUTHGATE.—The U.D.C. passed plans: C. E. Hartshorne, 36 houses, Firs-lane and Farm-road, and 40 garages; R. J. Smellie, amended plan of 11 houses, Avenue-road; C. S. Brown, amended plan of lay-out of part of Grovelands estate, showing 90 houses.

SOUTHPORT.—The T.C. are to apply for sanction to borrow £1,200 for the site of a new school at Birkdale.

SOUTH SHIELDS.—The Corporation are to acquire property in Keppel-street for purposes of a fire brigade station.—Premises in Albion-street has been acquired for office and showroom accommodation for the electricity department.—Plans have been prepared for the erection of a school of art, at a cost of £3,700.—Additional accommodation is to be provided at Cleadon Park sanatorium.—Plans passed: 14 houses, Central-gardens, for Davidson, Son & Sherwood.

SOWERBY BRIDGE.—The M.H. has approved the U.D.C.'s plans for the erection of 29 houses and 34 houses in connection with the Stansfield Court improvement scheme.

SPROUGHTON.—A proposal is afoot for the erection of a new hotel. Mr. H. Hooper is the architect.

STAMFORD.—The T.C. propose to erect 56 houses of the non-parlour type, subject to permission of the M.H.

STANNINGLEY (YORKS.).—Plans have been prepared for extensions at the Leigh Mills, for the Leigh Mills Co. The architect is Mr. Shackleton, of Pudsey, near Leeds.

STOKE-ON-TRENT.—The Housing Committee are considering the purchase of three acres at Fenton for housing purposes.—Land at Moorland-road, Burslem, is being acquired for a housing scheme.—Sanction is being sought for a loan of £31,000 for a housing scheme at Fenton.—The City Engineer has prepared plans for houses in May-street, to accommodate persons displaced by the Massey-square, Burslem, improvement scheme.—Approval has been given to plans of Hilton & Jones and the Newcastle Burgesses for the lay-out of housing sites at Stubbsfield.

STRETFORD.—The U.D.C. resolved that application be now made to the M.H. for sanction to the borrowing of £7,879 for the purpose of erecting 16 houses in Nelson-street.—Application is to be made to the M.H. for sanction to the borrowing of the sum of £2,544 2s. 9d. for the provision of a site for a public elementary school for 1,200 children at King's-road, Old Trafford.—Tenders for the erection of 16 houses on the Nelson-street site are to be invited.—The Council resolved that the reconstruction and widening of the railway bridge over Barton-road be approved.—Plans passed: Sub-station, Trafford Park, for W. T. Glover & Co., Ltd.; and warehouse and offices, Trafford Park.

STUBBINS.—Contracts are about to be let for the erection of a new church for the Rev. W. Minshaw, vicar of St. Mary's. The plans have been prepared by the diocesan architects, Messrs. Preston & Martin, of 90, Deansgate, Manchester.

STYAL.—Alterations are to be carried out by the Cheshire E.C. at the elementary school, at a cost of £400.

SUTTON BONINGTON.—The Agricultural E.C. of the Leicestershire C.C. reported that the Ministry would pay a grant of £26,500 towards the cost of the proposed new buildings at the Midland College, Sutton Bonington.

SWANSEA.—The E.C. recommend the erection of a new elementary school at Llansamlet, at £14,500, and the purchase of additional land for £103; erection of the old Vetch Field School building on a site to be acquired at Cadle, at £2,444; erection of Kilvey Central Schools (£65,500); erection of first instalment of additions to the Technical College to provide for the departments of building and mining (£35,000); first stage of additions to the High School for Girls (£9,600); improvements and additions to Cwm (£8,750), Dunvant (£2,600), and Tirdeunaw (£3,500) Elementary Council schools; and the erection of caretaker's house at High School for Girls (£650).—The C.B. resolved that a branch library building be erected in the Llansamlet Ward and the Borough Architect be asked to prepare plans and an estimate of cost.—The Borough Engineer and Surveyor reported that the M.H. has sanctioned the borrowing of the sum of £1,050 in respect of the Hafod public convenience, and the Council resolved that the Borough Engineer and Surveyor be asked to invite tenders.

TOLWORTH.—Having considered proposed alterations at the Isolation Hospital, the estimated cost being £10,656, the Hospital Board has instructed the architect to prepare alternative schemes for lighting and heating the hospital and providing nurses' quarters.

TYLDESLEY.—The Lancashire E.C. has acquired the offices of the Tyldesley U.D.C. for purposes of a school clinic.

TYNEMOUTH.—The Corporation have obtained consent to subsidise another 100 houses.—The Borough Engineer has prepared sketch plans for the erection of conveniences at Appleby-street and Hawket's-lane.

TROWBRIDGE.—The U.D.C. has passed plans for the erection of another 38 houses on the Charlotte-street housing site.

UPTON (W. YORK).—Plans have been approved for the erection of a new hotel on the new housing estate at Upton, for Messrs. Pickersgill's Brewery Co., Pontefract, at an estimated cost of £8,000. Messrs. Garside & Pennington, of Pontefract, are the architects.

WAKEFIELD.—The Corporation recommend the purchase of approximately 342 acres of land at Lupsett, upon which to erect houses of the working-class type.—The West Riding C.C. proposes to erect a new block of offices at the corner of Wood-street and Bond-terrace, in accordance with plans prepared by P. O. Platts, County Architect.

WELNEY.—Norfolk and Isle of Ely County Councils, the Ouse Drainage Board and the M.T. are to discuss arrangements for the reconstruction of the suspension bridge.

WEST CLANDON.—A new village hall is to be erected.

WEST KIRBY.—The B.E. has approved the plans for the erection of the Calday Grange Grammar School, which is estimated to cost £22,400.

WEY.—It is proposed to develop some 150 acres of the Wey Manor Estate, near Newhaw and Byfleet Village, by the erection of between 600 and 700 houses.

WEYBRIDGE.—It is proposed to build a hall for the Girl Guides.—The U.D.C. has approved the erection of 100 houses on the Old Palace-gardens site.

WHICKHAM.—The U.D.C. has approved plans prepared by the surveyor for the lay-out of land at Dunston on which it is proposed to erect 136 houses.

WHISTON.—The Hulton Colliery Co. has intimated to the R.D.C. their intention to proceed with the erection of an additional 50 houses on the Ivy Farm estate.

WHITBY.—The Whitby and Monkseaton U.D.C. has agreed that application be made to the M.H. for sanction to borrow the sum of £70,000 for a main sewerage scheme.—The Cheshire C.C. and the railway company are negotiating regarding a proposal for the construction of a subway at Ellesmere Port station, in lieu of the level crossing.

WHITEFIELD.—The U.D.C. are applying to the M.H. for sanction to borrow £1,340 for the construction of a tramway shelter and public convenience at the tram terminus—Sanction has been received to borrow £410 for the purchase of land for new Council offices.

WIGAN.—The Housing Committee are proposing to proceed with the erection of more houses for the Gidlow Farm estate.—Application is to be made to the M.H. for sanction to borrow £1,050 to purchase over nine acres of land in Leader-street for a housing site.

WIGTON.—Another big water scheme, estimated to cost £63,000, has been launched by the R.D.C.

WILLENHALL.—The Warwick County Surveyor is to report upon the cost of a scheme for widening the bridge.

WILLESDEN.—The U.D.C. has considered a report submitted, by the Chief Librarian on the urgent need for an extension of the Kensal-rise library newsroom.—The M.H. has sanctioned the following loans: £495, slab paving, footways, Harrow and Edgware-roads; £16,744 wood paving, Harrow-road, Willesden-lane, Church-road, and Walm-lane; £53,160, erection of 100 houses by Corolite Co. on the Brentfield Estate; £100,000, Small dwellings (Acquisition).

WIMBLEDON.—Builders are to be invited to submit plans, estimates and specifications for the erection of 70 houses on the Durnsford site, the cost not to exceed £450 per house.—The Corporation are negotiating for housing sites on the Downs estate.—The Corporation are acquiring land adjoining the town hall for the new building scheme.—The B.C. passed plans for W. L. Walker, for 18 lock-up garages and workshop on land adjoining 212, Merton-road.

WINCHESTER.—The T.C. are to make application to the M.H. for sanction to borrow £16,212 for the erection of 42 houses at Bar End.

WIRKSWORTH.—The U.D.C. has decided to apply to the M.H. for permission to commence a housing scheme.

WIRRAL.—The R.D.C. are to carry out sewerage schemes, at a cost of £41,500, in the parishes of Grange and Irby.

WISBECH.—Tenders are to be obtained by the Isle of Ely C.C. for the reconstruction of Elm bridge and Scott's bridge over the canal.

WOKING.—The Fire Brigade Committee recommended the adoption of the amended plans of the proposed new fire station, and the instruction of the Surveyor to get out details and estimate of cost.—The M.H. has sanctioned the building of 64 houses by the Council. Plans approved included those of 24 new residences, a detached shop, and a card-room at the Knaphill Working Men's Club.

WORKINGTON.—The Rev. Father D. C. Standish, O.S.B. (rector of Our Lady and St. Michael's Church), has given formal notice to the Education Committee, on behalf of the managers, of his intention to erect a Catholic Central School.

PRICES CURRENT OF MATERIALS

[Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry —Ed.]

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge. £ s. d.

Best Stocks 4 3 6
Second Hard Stocks 3 18 6

Per 1,000. Delivered at London Goods Stations.

Flettons, at	£ s. d.		£ s. d.
King's Cross	2 13 3	Best Blue Pressed Staffs	9 5 0
Do. grooved for Plaster	2 15 3	Do. Bullnose ..	9 15 0
Do. Bullnose ..	3 8 3	Blue Wire Cuts	7 5 0

Best Stourbridge Fire Brick :—

2½ in.	8 11 0	3 in.	10 3 0

GLAZED BRICKS—

Best White Ivory, and Salt Glazed Stretchers ..	21 10 0	D'ble Str'tch'rs	30 0 0
		D'ble Headers	27 0 0
		One Side and two ends	31 0 0
Headers	21 0 0	Two Sides and one End	32 0 0
Quoins, Bullnose and 4½ in. Flats	28 0 0	Splays and Squints	29 10 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours, Hard Glaze, £5 10s. extra over white.

BREEZE CONCRETE SLABS.

Delivered London.

	s. d.		s. d.
2 in. per yd. super	1 11	3 in. per yd. super	2 9
2½ in. " "	2 4	4 in. " "	3 6

	s. d.	
Thames Ballast	10 6	per yd.
Pit Sand	13 9	" "
Thames Sand	14 6	" "
Best Washed Sand	14 6	" "
½ in. Shingle for Ferro-Concrete	12 9	" "
¼ in. " "	14 0	" "
¼ in. Broken Brick	11 6	" "
Pan Breeze	7 6	" "

delivered 2 miles radius Paddington.

Per ton delivered in London area in full van loads.

Best Portland Cement. British Standard Specification. Test £2 18 0 to £3 5ls. alongside at Vauxhall in 80-ton lots. £ 3 6

Ferrocrete per ton extra on above		0	10 0
Super Cement (Waterproof)		4	8 0
Roman Cement		8	15 0
Parian Cement		5	15 0
Keene's Cement, White		5	15 0
" Pink		5	10 0
Plaster, Coarse, Pink		3	0 0
" " White		3	12 6
" Fine		5	12 0
Sirapite, Coarse		3	9 0
" Finish		3	17 0
Grey Stone Lime		2	11 9
Chalk Lime		2	11 9
Best Ground Blue Lias Lime		2	4 6
Hair		32	0 0
Granite Chippings		1	12 0

NOTE.—Sacks are charged 1s. 9d. each and credited 1s. 6d. if returned in good condition within three months carr. pd.

Stourbridge Fireclay in s'cks 35s. 0d. per ton at rly. dp.

STONE.

	s. d.
BATH STONE—delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube....	2 9½
Do. do. delivered in railway trucks at Nine Elms, L. & S.W.R., per ft. cube.....	2 11½

PORTLAND STONE—

Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, L. & S.W.R., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube..... 4 4

Do. do delivered on road wagons at above stations, per ft. cube..... 4 5

White basebed, 3d. per ft. cube extra.

NOTE.—1d. per ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft.

HOPTON-WOOD STONE—

Delivered at any Goods Station, London.	s. d.
Small random blocks, up to 10 ft. cube. P. ft. cb.	7 0
Random blocks from 10 ft. and over "	17 0
Sawn two sides..... "	27 0
Sawn three or four sides..... "	32 0

YORK STONE, BLUE—*Robin Hood Quality.*

Delivered at any Goods Station, London.	s. d.
6 in. sawn two sides landings to sizes (under 30 ft. super.) ..... Per ft. super	5 6
6 in. rubbed two sides, ditto..... "	6 0
3 in. sawn two sides slabs (random sizes) "	2 3½
2 in. to 2½ in. sawn one side slabs (random sizes) ..... "	1 6½
1½ in. to 2 in. ditto, ditto..... "	1 4

HARD YORK—

Delivered at any Goods Station, London.	
Scappled random blocks ..... Per ft. cube	6 3
6 in. sawn two sides landing to sizes (under 40 ft. super) ..... Per ft. super	5 1½
6 in. rubbed two sides, ditto ..... "	6 1½
4 in. sawn two sides slabs (random sizes) "	2 10
3 in. ditto ditto "	2 1½
2 in. self-faced random flags.... Per yd. super	9 0

ARTIFICIAL STONE.

Delivered in London Area in full van loads, per ft. cube :—Plain, 8s. 6d.; Moulded, 9s. 6d. Cills, 10s. 0d.

WOOD.

GOOD BUILDING DEAL.

Inches.	per stan.	Inches.	per stan.
4 × 11	£28 0	3 × 6	£21 0
4 × 9	25 0	3 × 11	25 0
4 × 8	24 0	2 × 11	25 0
4 × 7	23 0	3 × 9	24 0
3 × 8	21 0	2½ × 9	23 0
3 × 7	20 0	3 × 4½	22 0
2½ × 7	20 0	3 × 4	22 0

PLANED BOARDS.

1 × 11	£27 0	1 × 9	£26 0

PLAIN EDGE FLOORING.

Inches.	per sq.	Inches.	per sq.
⅝	20/-	1½	31/-
¾	22/-	1¾	34/-
1	25/-		

TONGUED AND GROOVED FLOORING.

Inches.	per sq.	Inches.	per sq.
1	25/-	⅝	16/6
1¼	31/-	¾	19/-
1½	34/-	1	24/-

MATCHING (BEST).

BATTENS.

Inches.	s. d.
⅞ × 2	2 6 per 100 ft.

SAWN LATHS.

Per bundle	0 2 4

1" AND UP THICK.

	£ s. d.	£ s. d.
Dry Austrian Wainscoat, per ft. cube	0 16 0 to	0 18 0
Dry American and /or Japanese Figured Oak, ft. cube	0 15 0 to	—
Dry American and/or Japanese Plain Oak, ft. cube	0 11 0 to	0 13 0
Dry sq. edged Honduras Mahogany, ft. cube	0 16 0 to	0 18 0
Dry Log cut Honduras Mahogany, ft. cube	0 18 0 to	1 1 0
Dry Cuba Mahogany, ft. cube..	1 4 0 to	1 10 0
Dry Teak, ft. cube	0 13 0 to	0 15 0
Dry American Whitewood, ft. cube	0 11 0 to	0 14 0
Best Scotch glue, per cwt.	4 10 0 to	—
Liquid Glue, per cwt.....	4 7 0 to	5 10 0

SLATES.

First quality slates from Bangor or Portmadoc carriage paid in full truck loads to London Rate Station. Per 1,000 of 1,200.

£ s. d.		£ s. d.
24 by 12 .... 37 12 6	18 by 10	21 2 6
22 by 12 .... 34 0 0	18 by 9	18 12 6
22 by 11 .... 31 5 0	16 by 10	17 12 6
20 by 12 .... 29 15 0	16 by 8	13 15 0
20 by 10 .... 25 12 6		

TILES.

	Per 1,000 f.o.r. London. £ s. d.
Best machine-made tiles from Broseley or Staffordshire district	5 12 6
Ditto hand-made ditto	5 17 6
Ornamental ditto	6 2 6
Hip and valley tiles (per dozen) { Hand-made	0 9 6
{ Machine-made	0 9 0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION, PER TON—	£ s. d.
R.S. Joists, cut and fitted	12 10 0
Plain Compound Girders	14 10 0
" Stanchions	16 10 0
In Roof Work	19 10 0

MILD STEEL ROUNDS.

To London Station, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
¼ in.	12 0 0	⅝ in. to ¾ in ..	10 15 0
⅜ in.	11 0 0	⅞ in. to 2½ in...	10 10 0

WROUGHT-IRON TUBES AND FITTINGS—

(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward if sent from London Stocks.)

	Tubes.	Fittings.	Flanges.
Black Gas	60 % ..	50% ..	60%
Galvanised Gas	45 % ..	40% ..	50%
Blue Water	55 % ..	45% ..	55%
Galvanised Water	38½% ..	35% ..	45%
Red Steam	50 % ..	40% ..	50%
Galvanised Steam	32½% ..	30% ..	40%

C.I. HALF-ROUND GUTTERS—London Prices, ex Works.

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	1/2½	11½d.	3½d.
3½ in.	1/4	1/0½	3½d.
4 in.	1/5	1/2½	3½d.
4½ in.	1/6½	1/4	4½d.
5 in.	1/9½	1/5½	5½d.
O.G. GUTTERS.			
3 in.	1/7	1/3½	3½d.
3½ in.	1/7	1/3½	3½d.
4 in.	1/8½	1/4	3½d.
4½ in.	1/10½	1/6½	4½d.
5 in.	2/3	1/9½	5½d.

RAIN-WATER PIPES, &c.

Per yd. in 6 fts.	Pipe.	Bends, stock angles.	Branches, stock angles.
		s. d.	s. d.	s. d.
2 in. plain	1/9½	1/2½	1/8½
2½ in. "	1/11½	1/4	2/0½
3 in. "	2/4½	1/8	2/6
3½ in. "	2/10	2/-	2/10½
4 in. "	3/3	2/4½	3/6

L.C.C. COATED SOIL PIPES—London Prices, ex Works.

Pipe.	Bends, stock angles.	Branches, stock angles.
	s. d.	s. d.	s. d.
2 in. per yd. in 6fts. plain	2 11 ..	2 3 ..	2 9
2½ in. "	.. 3 5 ..	2 6 ..	3 5
3 in. "	.. 4 1 ..	2 9 ..	4 0½
3½ in. "	.. 4 5½ ..	3 5 ..	4 8½
4 in. "	.. 4 11½ ..	3 9½ ..	5 5½

L.C.C. COATED DRAIN PIPES—London Prices ex Works.

Pipe.	Bends, stocks angles.	Branches, stock angles.
	s. d.	s. d.	s. d.
3 in. per yd. in 9ft. lengths	4 3 ..	5 9 ..	7 8
4 in. " "	.. 6 3 ..	6 11 ..	9 6
5 in. " "	.. 7 10 ..	12 0 ..	16 3
6 in. " "	.. 9 6 ..	15 0 ..	20 9

Gasken for jointing, 38/6 per cwt.

	Per ton in London. £ s. d.	£ s. d.
IRON—		
Common Bars	13 0 0 to	14 10 0
Staffordshire Crown Bars—good merchant quality	14 5 0 ..	15 5 0
Staffordshire "Marked Bars	16 5 0 ..	17 5 0
Mild Steel Bars.....	10 0 0 ..	11 0 0
Steel Bars, Ferro-Concrete quality, basis price	10 0 0 ..	11 0 0
Hoop iron, basis price	12 0 0 ..	13 0 0
" Galvanised	27 0 0 ..	28 0 0

Soft Steel Sheets, Black—

Ordinary sizes to 20 g..	13 5 0 ..	14 5 0
" " " 24 g..	14 5 0 ..	15 5 0
" " " 26 g..	16 5 0 ..	17 5 0

Sheets Flat Best Soft Steel, C.R. & C.A. quality—

Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g..	15 10 0 ..	16 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.....	16 10 0 ..	17 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g. ..	18 10 0 ..	20 10 0

No. 1 quality £4 per ton extra.

Flat and Galvanised Corrugated Sheets—

Ordinary sizes, 6 ft. to 9 ft. to 20 g.....	18 10 0 ..	19 10 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g.	19 0 0 ..	20 0 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.....	22 0 0 ..	23 0 0

Sheets Galvanised Flat, Best quality—

Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker....	22 0 0 ..	23 0 0
Best Soft Steel Sheets, 22 g. and 24 g.....	24 0 0 ..	26 0 0
Best Soft Steel Sheets, 26 g.	25 0 0 ..	26 1 0
Cut Nails, 3 in. to 6 in...	19 0 0 ..	20 0 0

(Under 3 in. usual trade extras.)

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

LEAD, &c.

(Delivered in London.)	£ s. d.
LEAD—Sheet, English, 4 lb. and up.....	46 10 0
Pipe in coils	48 0 0
Soil Pipe.....	50 0 0
Compo Pipe	51 0 0

NOTE—Country delivery, 30s. per ton extra: lots under 3 cwt., 3s. per cwt. extra, and over 3 cwt. and under 5 cwt., 1s. 6d. per cwt. extra. Cut to sizes, 2s. cwt. extra.

Old lead, ex London area, at Mills ..... per ton	32 0 0	—
Do., ex country, carriage forward ..... per ton	33 0 0	—

COPPER.

	s. d.
Seamless Copper tubes (basis)..... per lb.	1 1
Strong sheet..... "	1 0
Thin ..... "	1 1
Copper nails..... "	2 3
Copper wire ..... "	2 4

PLUMBERS' BRASS WORK.

Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.	
29/-	45/-	76/-	153/-	246/-	510/-	per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.	
41/6	62*-	92/-	174/-	300/-	588/-	per doz.

NEW RIVER PATTERN SCREW DOWN MAIN FERRULES.

½ in.	¾ in.	1 in.	
39/6	60/-	116/6	per doz.

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.	
7/6	10/-	14/-	23/-	30/-	42/-	per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.	
7/6	11/-	17/-	29/-	36/-	63/-	per doz.

BRASS SLEEVES.

1¼ in.	2 in.	3 in.	3½ in.	4 in.	
10/-	12/-	20/-	24/-	31/-	per doz.

NEW RIVER PATTERN CROYDON BALL VALVES, S.F.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	
35/-	56/-	98/-	162/-	228/-	per doz.

DRAWN LEAD P. & S. TRAPS WITH BRASS CLEANING SCREW.

1½ in.	1½ in.	2 in.	3 in.	
8 lbs. P. traps ..	33/-	41/-	56/-	101/- per doz.
8 lbs. S. traps ..	35/-	45/-	66/-	126/- "

TIN—English Ingots, 2/9 per lb. SOLDER—Plumbers' 1/2, Tinmen's 1/5. Blowpipe 1/6 per lb.

PAINTS, &c.

	£ s. d.
Raw Linseed Oil, in pipes .... per gallon	0 3 1
" " " in barrels.... "	0 3 3
" " " in drums.. . "	0 3 6
Boiled " " in barrels.... "	0 3 6
" " " in drums .... "	0 3 9
Turpentine in barrels ..... "	0 5 6
" in drums (10 gall.).. "	0 5 8
Genuine Ground English White Lead, per ton (In not less than 5 cwt. casks.)	55 15 0

GENUINE WHITE LEAD PAINT—"Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganswyte," "Polacco," "J." Brand and other best brands (in 14 lb. tins) not less than 5 cwt. lots per ton delivered 75 15 0

Red Lead, Dry (packages extra)..	per ton	49 0 0
Best Linseed Oil Putty.....	per cwt.	0 15 0
Flocol	"	0 15 6
Size. XD Quality.....	/kn.	0 3 6

Continued on next page.

*The information given on this page has been specially compiled for THE BUILDER and is copyright. Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS (*contd.*)

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

	Per Ft.		Per Ft.
15 oz. fourths ..	3½d.	32 oz. fourths	8d.
15 „ thirds	4½d.	32 „ thirds	9½d.
21 „ fourths ..	4½d.	Obscured Sheet, 15 oz.	4d.
21 „ thirds	5½d.	„ „ 21 „	5½d.
26 „ fourths ..	5½d.	Fluted 15oz. 6½d., 21oz.	9½d.
26 „ thirds	7½d.	En'lled 15oz. 5½d., 21oz.	7½d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
⅛ Rolled plate	4½d.
⅛ Rough rolled	5½d.
¼ Rough rolled	5½d.
Figured Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish White..	6½d.
Ditto, tinted	9d.
Rolled Sheet	6d.
White Rolled Cathedral	5½d.
Tinted do.	7½d.

Cast Plate is same price as rough rolled.

VARNISHES, &c.

		Per Gallon. £ s. d.
Oak Varnish	Outside	0 14 0
Fine ditto	ditto	0 16 0
Fine Copal	ditto	0 18 0
Pale Copal	ditto	1 0 0
Pale Copal Carriage	ditto	1 4 0
Best ditto	ditto	1 12 0
Floor Varnish	Inside	0 18 0
Fine Pale Paper	ditto	0 18 0
Fine Copal Cabinet	ditto	1 2 6
Fine Copal Flatting	ditto	1 0 6
Hard Drying Oak	ditto	0 18 0
Fine Hard Drying Oak	ditto	0 19 0
Fine Copal Varnish	ditto	1 0 0
Pale ditto	ditto	1 2 0
Best ditto	ditto	1 12 0
Best Japan Gold Size		0 12 6
Best Black Japan		0 10 6
Oak and Mahogany Stain (water)		0 12 0
Brunswick Black		0 7 6
Berlin Black		0 14 6
Knotting (patent)		1 5 0
French and Brush Polish		0 17 0
Liquid Dryers in Terebine		0 9 0
Chinese Black Enamel		0 7 0

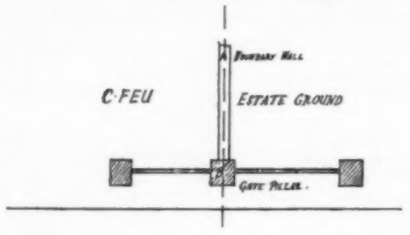
Scottish Steel Houses.

It is stated in a recent issue of the *Morning Post* that the directors of the Cathcart Engineering Works are planning the provision of the thousand homes ordered by the Government. Another site is being secured in Glasgow by the Scottish National Housing Co. Negotiations, if not yet complete, are well advanced. The allocation of Weir houses by the Scottish Board of Health is: Glasgow, 400; Edinburgh, 200; Dundee, 150; Greenock, 100; Lanark, 100; and Clydebank, 50.

THE SCOTTISH BUILDER

FIXTURE ON PARTY WALL: QUESTION OF REMOVAL

THE accompanying sketch shows what appears to be a party fence wall, which belongs to the owners on each side as tenants in common. It can be considered to be divided in two strips—one strip belonging to each owner, as indicated by the dotted line which passes through its centre, and including the pillar on which the sundial is said to be placed. Since, too, this is the boundary wall, each owner is entitled to so much of the wall as is on his own land. There is common user of it, and it must be maintained as a dividing wall between the feu C, and the estate ground;



and in general, the superiors of the estate cannot do any act thereto which amounts to partial damage and causes disturbance to the fuer of C. If such damage or disturbance is done, then, though an action for trespass cannot be maintained, an action for damages would lie. Now, whether the sundial passed with the feu depends on the intention of the parties as expressed in the feu-contract. If the latter is silent in that respect, then the removal of the sundial amounts to partial damage or disturbance, and therefore cannot be effected. The tenancy in common extends to the sundial. Again, on a sale of land, in the absence of some expression in the contract showing or implying an intention to the contrary, all fixtures annexed thereto at the time of the sale pass with the land to the purchaser. In this case it is not stated whether the sundial is in fact fixed to the pillar or not; but in any case it appears to be a fixture that is not removable, for it is incapable of being divided up without injury to itself, nor can one strip of the wall be pulled down without disturbing the sundial.

The annexation of the sundial was for the permanent and substantial improvement of the property; and here there appears to have been the intention to make the sundial part of the reality. Even unfixed articles have been held to be fixtures as an essential part of the property, or of the architectural design of the buildings or grounds. Therefore, as stated, if there was an apparent intention to make the sundial a part of the wall, as appears, and there was nothing expressed in the feu-contract to the contrary, the sundial cannot, it appears, be removed.

NEW BUILDINGS IN SCOTLAND

Hamilton. — HOSPITAL EXTENSION. — The Town Council has decided to extend its hospital at Udston, Burnbank, by the erection of a one-story pavilion with twenty beds, at a cost of £5,663. A laundry block, costing £5,737, is also to be provided, and is to be connected with the isolation block for central heating and hot water at £150 additional.

Inverness.—HOUSES.—The Inverness Town Council propose to proceed with the erection of six more blocks of four houses each.

Rothesay.—HOUSES.—The Town Council has adopted a slum clearance scheme, involving the demolition of 100 insanitary dwellings, and the erection of a similar number elsewhere.

Upper Renfrewshire.—HOUSES.—The Upper Renfrewshire Housing Committee has received the Scottish Board of Health's approval of the erection of 24 houses of three apartments and 40 houses of two apartments at Neilston.

Kirkcaldy.—SCHOOL.—Plans have been passed for the erection of a new school at corner of St. Brycedale-road and Gow-crescent, for the Fife E.C.

Edinburgh.—HOUSES.—Plans passed by the Dean of Guild Court: 224 houses at Lochend for the City.

Jedburgh.—BRIDGE.—The M.H. has informed the Joint Bridges Committee of Jedburgh Town Council and Jedburgh District Committee that a grant of 65 per cent. will be given in respect of the cost of the new bridges which are to be built on the River Jed.

Glasgow.—BUILDING.—In view of the constant repairs being made to Barnhill Poorhouse, Mr. M. A. Reynard, the Clerk, has suggested to the Parish Council that a new site be obtained in the country, where buildings of the village type could be erected, which would thus ensure separate accommodation for the inmates, and also facilitate administration.

Glasgow.—BUILDING.—The Governors of Glasgow Victoria Infirmary state that the opening of the new wing will involve an additional annual expenditure of £14,000. It is proposed to erect an auxiliary hospital at Thorntonhall, the plans providing for 200 beds.

Cumnock.—HOUSES.—The Town Council has agreed to petition the Scottish Board of Health for permission to build an additional 50 houses in their housing scheme.

Obituary.

The death has occurred of Mr. John Paterson, late of William Tawse & Co., contractors, at the age of 60 years.

Glasgow's Steel Houses.

The Dean of Guild Court has passed plans for 40 Weir houses, and a site is being cleared at Hollybank-street, Garngad.

BUILDING TRADE WAGES IN SCOTLAND.*

THE following are the present rates of wages in the building trade in the principal towns of Scotland. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur:—

	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers—Masons', Bricklayers', Plasterers'.
Aberdeen	1/8	1/8½	1/8	1/8	1/8	1/8	1/7	10½d. to 1/1
Airdrie	1/8	1/8	1/8	1/8	1/8	—	1/6½	1/3
Alexandria	1/8	1/8	1/8	1/8	1/8	1/8	—	1/2½ to 1/3½
Arbroath	1/7	1/7	1/7	1/7½	1/7	1/7	1/5½	1/1½
Ayr	1/8	1/8	1/8	1/8	1/8	1/8	1/6½	1/3
Bathgate	1/8	1/8	1/8	1/8½	1/8	1/8	1/6½	1/2 to 1/3
Blairgowrie	1/7	1/7	1/7	1/7½	1/5	1/7	1/4	10d. to 1/-
Bo'ness	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3
Coatbridge	1/8	1/8	1/8	1/8	1/8	—	1/6½	1/3 to 1/3½
Dumbarton	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Dumfries	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Dundee	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3
Dunfermline	1/8	1/8	1/8	1/9	1/8	1/8	1/8	1/3
Edinburgh	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3
Falkirk	1/7½	1/7½	1/7	1/8	1/7	1/7	1/6½	1/2½
Fort William	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/2
Galashiels	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Glasgow	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Greenock	1/8	1/8	1/8	1/9	1/8	1/8	1/7	1/0½ to 1/3½
Hamilton	1/8	1/8	1/8	1/9	1/8	1/8	1/6½	1/3½
Hawick	1/7	1/7	1/7	1/7-1/7½	1/7	1/7	1/7	1/2½
Helensburgh	1/8	1/8	1/8	1/9	1/8	1/8	1/7	1/3½
Inverness	1/5	—	1/5	1/4	1/5	1/5	1/4	1/- to 1/2
Kilmarnock	1/8	1/8	1/8	1/9	1/8	1/8	1/8	1/3½
Kirkcaldy	1/8	1/8	1/8	1/9	1/8	1/8	1/8	1/3½
Kirkwall	1/5	1/5	1/4	1/5	1/5	1/4	1/4	1/-
Lanark	1/8	1/8	1/8	1/9	1/8	1/8	1/6	1/0 to 1/3
Leith	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Motherwell	1/8	1/8	1/8	1/9	1/8	1/8	1/6½	1/3½
Perth	1/8	1/8	1/8	1/9	1/8	1/8	1/6½	1/3
Stirling	1/8	1/8	1/8	1/9	1/8	1/8	1/8	1/3½
Stirlingshire (Eastern District)	1/8-1/10	1/8 1)10	1/8	1/9	1/7	1/8	1/6½	1/3½
Wishaw	1/8	1/8	1/8	1/9	1/8	1/8	1/7	1/3½

* The information given in this table is copyright. The rates of wages in the various towns in England and Wales are given on page 375.

CURRENT PRICES FOR BUILDING WORK IN LONDON

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	11	0
Add if in clay	" "	1	0
Add for every additional depth of 6 ft.	" "	0	6
Planking and strutting to trenches	per foot super	0	5
Do. to sides of excavation, including shoring	" "	1	0

CONCRETOR.

		s.	d.
Portland cement concrete in foundation 1 to 6	per yard cube	32	0
Add if in underpinning in short lengths	" "	7	0
Add if in floors 6 in. thick	" "	3	3
Add if in beams	" "	3	9
Add if aggregate 1 : 2 : 4	" "	10	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	" "	2	6

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	30	0	0
Add if in stocks	"	7	10	0
Add if in Staffordshire blues	"	22	0	0
Add if in Portland cement and sand	"	1	10	0

FACINGS.

		s.	d.
Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	0	1½

POINTING.

		s.	d.
Neat flat struck or weathered joint	" "	0	0	3

ARCHES.

		s.	d.
Extra only to the price of ordinary brickwork :—			
Fair external in half brick rings	" "	0	0	10
Axed in stocks	" "	0	1	9
Rubbed and gauged jointed in putty camber or segmental	" "	0	6	0

SUNDRIES.

		s.	d.
Damp course in double course of slates breaking joint and bedded in Portland cement	" "	0	1	0
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks	"	4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard sup.	4	3
Three-quarter-inch vertical damp course	" "	8	6
¾ inch on flats in two thicknesses	" "	6	3
Angel fillet	per foot run	0	3
Skirting and fillet 6 in. high	" "	1	2

MASON.

		s.	d.
York stone templates fixed	per foot cube	13	0
York stone sills fixed	" "	22	0
Bath stone and all labour fixed	" "	10	6
Portland stone fixed	" "	20	0

SLATER.

		s.	d.
Welsh 16 in. × 8 in. 3 in. lap, including nails	per square	72	9
Do 20 in. × 10 in. Do. Do.	"	80	9
Do. 24 in. × 12 in. Do. Do.	"	90	0

CARPENTER AND JOINER.

		s.	d.
Fir framed in plates	per foot cube	5	0
Do. joists	" "	5	6
Do. roofs, floors, and partitions	" "	6	0
Do. trusses	" "	8	6

		¾"	1"	1¼"	2"
Deal rough close boarding	per sq.	35/6	40/-	45/-	72/-

		s.	d.
Flat centering for concrete floor, including struts or hangers	"	50	0
Do. to beams	per ft. sup.	1	0
Centres for arches	"	1	6
Gutter boards and bearers	"	1	0

FLOORING.

		¾"	1"	1¼"	1½"
Deal-edges shot	per sq.		44/6	53/-	60/6
Do. tongued and grooved	"		49/-	57/6	65/-
Do. matchings	"	45/-	51/-		
Moulded skirting, including backings and grounds	per ft. sup.	1/6	1/9	2/0	2/6

SASHES AND FRAMES.

		s.	d.
One-and-a-half moulded sashes or casements	per foot super.	1	10
Two Do. Do. Do.	" "	2	1
Add for fitting and fixing	" "	0	3
Deal-cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares, double hung, double hung with pulleys, lines and weights; average size	" "	3	9

DOORS.

		1½"	1¾"	2"
Two-panel square framed	per ft. sup.	2/1	2/4	2/6
Four-panel Do.	"	2/5	2/8	2/11
Two-panel moulded both sides	"	2/8	2/11	3/2
Four-panel Do. Do.	"	2/11	3/2	3/5

CARPENTER AND JOINER—continued.

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	14	0

		1"	1½"	1¾"
Plain deal jamb linings framed	per ft. sup.	1/7	1/8	1/11
Deal sheives and bearers	"	1/4	1/6	1/9
Add if cross-tongued	"	2d.	2d.	2d.

STAIRCASES.

	1"	1¼"	1½"	2"	2½"
Deal treads and risers in and including rough brackets	2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed	1/8	2/-	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. × 1¼ in.	per ft. run	0	9
Mahogany handrail: average 3 in. × 3 in.	" "	6	0
Add if ramped	" "	11	10
Add if wreathed	" "	23	9

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/-
Sash fasteners	11½d.	Mortice locks	4/6
Casement fasteners	1/5	Patent spring hinges and letting into floor and making good	19/-
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	16	3
Plain compound girders	"	19	0
Do. stanchions	"	21	9
In roof work	"	27	6

RAIN-WATER GOODS.

		3"	4"	5"	6"
Half-round plain rebated joints	ft. run	1/6	1/9	2/-	2/6
Ogee Do. Do.	"	1/9	2/-	2/6	3/3
Rain-water pipes with ears	"	1/9	2/7	—	—
Extra for shoes and bends	each	4/4	5/11	—	—
Do. stopped ends	"	1/11	2/4½	3/7	4/-
Do. nozzles for inlets	"	2/2	2/7	3/10	4/3

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	60	6
Do. Do. in flats	"	59	0
Extra labour and solder in coated cesspools	each	6	9
Welf joint	per ft. run	0	6
Soldered seam	" "	1	6
Copper nailing	" "	0	6

		½"	¾"	1"	1½"	2"	4"
Drawn lead waste	per ft. run	1/2	1/9	2/-	3/4	4/-	—
Do. service	"	1/8	2/2	2/7	3/10	—	—
Do. soil	"	—	—	—	—	—	6/9
Bends in lead pipe	each	—	—	—	—	3/3	8/2
Soldered stop ends	"	1/2	1/8	2/1	2/10	3/6	—
Red lead joints	"	11d.	1/-	1/3	1/11	2/4	4/10
Wiped soldered joints	"	2/10	3/6	4/-	4/11	6/6	9/9
Lead traps and cleaning screws	"	—	—	—	14/7	19/6	—
Bib cocks and joints	"	6/4	9/7	15/4	41/-	—	—
Stop cocks and joints	"	15/4	17/2	25/8	64/-	—	—

PLASTERER.

		s.	d.
Render, float and set in lime and hair	per yard sup.	2	4
Do. Do. Sirapite	" "	2	7
Do. Do. Keen's	" "	3	7
Add sawn lathing	" "	1	7
Add metal lathing	" "	2	6
Portland cement screed	" "	2	2
Do. plain face	" "	3	3
Mouldings in plaster	per 1 girth	0	1½
One-and-a-half granolithic pavings	per yard sup.	5	9

GLAZIER.

		s.	d.
21 oz. sheet plain	per foot sup.	0	8½
26 oz. Do.	" "	1	0
Obscured sheet	" "	1	1
⅛ in. rolled plate	" "	0	9
¼ in. rough rolled or cast plate	" "	0	10½
¼ in. wired cast plate	" "	1	4

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	" "	0	7
Plain painting, 1 coat	" "	0	9
Do. 2 coats	" "	1	2
Do. 3 coats	" "	1	9
Do. 4 coats	" "	2	4
Graining	" "	2	3
Varnishing twice	" "	1	9
Sizing	" "	0	3
Flatting	" "	0	7
Enamel	" "	1	1
Wax polishing	per foot sup.	0	6
French polishing	" "	1	2
Preparing for and hanging paper	per piece, 2/- to 4/-		

* These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10 % on the prime cost without establishment charges. A percentage of 1½ should be added for Employers' Liability and National Health and Unemployment Acts and from 1s. 6d per £100 for Fire Insurance. The whole of the information given on this page is copyright.

TRADE NEWS

We are informed that Beaver House, which was illustrated in our issue for February 12, was fitted with Kinnear patent steel rolling shutters.

The National Radiator Co., Ltd., of Hull, has arranged to exhibit a film showing the making of their radiators and boilers at the Municipal Technical College, Blackburn, on Thursday evening, March 4, under the auspices of the Building Association. An invitation is extended to any professional and trade firms who are not members of the Association.

"The Roadmaker."

The February issue of this magazine, issued on behalf of the British Reinforced Concrete Engineering Co., Ltd., of Trafford Works, Manchester, contains an interesting editorial on road administration; "Some Impressions of America," by Mr. B. Cooper, borough engineer and surveyor of Paddington; and a bright article by Mr. C. G. Harper, entitled "Shakespeare's Roads to London." We have also received from this firm some notes on the use of reinforced concrete in road work; the booklet is divided under three headings, viz., Subsoil, Concrete and Reinforcement.

Boilers.

Messrs. R. Jenkins & Co., Ltd., of Rotherham, have issued a completely up-to-date price-list of their boilers, which are supplied to the Admiralty, the War Office and H.M. Office of Works. The firm manufacture wrought-steel welded boilers of every description for heating hot water by low pressure and for domestic hot water supply, range boilers, welded cylinders, steam cooking pans, brazed copper boilers and cylinders, vertical steam boilers, storage tanks for water, oil, petrol, etc. Messrs. Jenkins are the inventors and sole makers of "Ivanhoe," "Victor," "Delta," "O-Sho," "Eco," and "Kalor" boilers. Their London office is at 15, Victoria-street, Westminster, S.W.1.

Woodworker.

We have received from Messrs. Thomas Robinson and Son, Ltd., of Rochdale, a booklet dealing with the operation and maintenance of the "Universal" woodworker, type "CI." This handbook explains, very simply and clearly, the best and easiest way to perform the wide variety of operations of which the "Universal" woodworker is capable. Messrs. Thomas Robinson & Son, Ltd., will send a copy of the handbook to anyone interested.

Shepherds N-E-W-S.

We have received the January issue of *Shepherds N-E-W-S*, a journal published "in the interest of better roads." This number contains a symposium by county surveyors and others on the "Safety First" campaign; data for the preparation of roadmaking estimates, by Mr. P. Price Davies, F.S.I.; an article by the Rt. Hon. D. Lloyd George dealing with the fact that London traffic blocks cost £20,000,000 per year; and a further instalment of the Roadmaker's Alphabet.

Cement Waterproofer.

In our issue of January 12, Medusa waterproofing compound was inadvertently referred to as a new material. This is entirely erroneous, the compound having been in continuous use for eighteen years—a period during which the builder has had ample time to test and appreciate it. It is claimed that only 2 per cent. of this waterproofer to the weight of the cement is necessary to produce impermeability, providing it is used according to the best methods as outlined in the firm's booklet. Apart from its waterproofing effect, the compound may be included in a sand and cement rendering as a cure for damp walls. The descriptive booklet may be obtained from the makers, Messrs. G. & T. Earle, Ltd., of Wilmington, Hull.

TENDERS

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

* Denotes *accepted*. † Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modification*.

ASHFORD.—Alterations and additions to the Assembly Rooms, for the U.D.C. Mr. E. A. Jackson, L.R.I.B.A., architect; quantities by the architect.

†J. R. Barwick, Dover	£4,250 0 0
F. Knock, Ashford	4,114 0 0
D. Godden & Son, Hamstreet	4,094 0 0
C. I. Epps, Ashford	3,987 3 5
Norman Smith & Son, Maidstone	3,852 3 6
W. Shippam, Ashford	3,788 0 0
*S. H. Howland, Ashford	3,754 16 0
W. P. Woodgate, High Halden	3,525 0 0
J. B. Sharman, Ltd., Ramsgate	3,388 0 0

BARNET.—Houses at Shenley-road, Boreham Wood, Green-street, Shenley, London Colney, and Ridge, for the R.D.C.:—
*Arthur Cole, Ltd.

BARROW-ON-SOAR.—Reconstruction of bridge No. 64, carrying the main Leicester to Loughborough line, for the L.M. & S. Rly. Co.:—
*J. Butler & Co., Ltd., Stanningley, Leeds.

BATTLE.—Kitchenham-road scheme, for the R.D.C.:—

*Chittenden & Sommons	£63,568 7

BIGGLESWADE (BEDS).—Additions to "Swan" Hotel, for Messrs. Wells & Winch, Ltd. Messrs. Cockrill & Sellek, architects, 7, St. Paul's-square, Bedford:—

F. Newton, Hitchin	£799
S. Redhouse, Stotfold	775
Geo. Wrycroft & Sons, St. Neots	749
*Geo. Bartle & Son, Potton	700

BLACKPOOL.—Sub-station at Anchorsholme, for the C.B.:—
*Dryland & Preston.

BLACKPOOL.—Construction of underground chamber, extension of Talbot-square chamber, for the C.B.:—
*Dryland & Preston.

BLACKPOOL.—Sub-station at the Pleasure Beach, for the C.B.:—
*Dryland & Preston.

BLACKPOOL.—Sub-station at Devonshire-road, at its junction with Talbot-road, for the C.B.:—
*Sir Lindsay Parkinson & Co. (Blackpool), Ltd.

BLACKPOOL.—Construction of underground chamber at the Wellington Refuge, opposite Central Pier, for the C.B.:—
*Dryland & Preston.

BOURNEMOUTH.—Rebuilding of premises at 134, 136 and 138, Old Christchurch-road, to provide new showrooms and offices, for the Gas & Water Co., Poole Hill. Messrs. Reynolds & Tomlins, architects, Granville Chambers:—
*J. W. Hayward, Bournemouth.

BRIGHTON.—Erection of a Junior mixed school at Moulsecoomb, for the T.C.:—

Hoad & Taylor, Horsham	£16,937 11 8
Andrews & Co., Peacehaven	16,244 6 0
J. Bodle, Ltd., Eastbourne	15,312 0 0
Norman & Burt, Burgess Hill	15,078 0 0
W. Lawrence & Son, London	14,502 0 0
Saunders & Son, Brighton	14,401 0 0
H. J. Penfold, Brighton	14,212 0 0
The Ringmer Building Works, Ringmer	14,202 0 0
Field & Cox, Brighton	14,044 0 0
William Willett, Hove	13,990 0 0
J. Barnes & Sons, Brighton	13,904 0 0
‡Cook & Sons, Crawley	13,683 0 0
J. W. Woolnough, Ltd., Eastbourne	12,759 0 0

BRIGHTON.—Two hundred houses on the Beershop Field housing site, for the C.B.:—

R. Cook & Sons, Crawley	£155,376
Walter Jones & Sons, Ltd., Westminster	138,516
J. Bodle, Ltd., Eastbourne	133,979
Warn & Ogden, Fareham	116,350
‡A. Bull & Co., Ltd., Doncaster	112,234

CARDIFF.—One thousand houses on an estate at Splott Park. Mr. Gordon Griffiths, A.R.I.B.A., architect, Whitchurch, Glam.:—
**Building work*—W. Moss & Son, Cardiff.
**Electrical work*—Haddull & Hutchinson.
**Ballast stone for roads*—E. Light & Son, Cardiff
**Paints*—Hallard & Sons, Ltd., Merton, S.W.

CARLISLE.—Painting, &c., with the steelwork structure forming the coal storage at the Generating Station, Willow Holme, for the T.C. Mr. C. W. Salt, city electrical engineer, Victoria-viaduct:—
*Stirling Builder Co., London | £276

CHELTENHAM.—Reconstruction of the St. James' Church of England schools. Messrs. L. W. Barnard, F.R.I.B.A., & Partners, architects, 14, Promenade, Cheltenham:—
*C. S. Morris & Son, Cheltenham.

CHESTERFIELD.—Shops, &c., at the corner of Highfield-lane and Highfield-avenue. Mr. Bailey Deeping, F.R.I.B.A., architect, 12, Gluma Gate:—
*J. Collis & Sons, Salter Gate.

DARTMOUTH.—Additional offices, for the T.C.:—
*H. G. Triggs | £350

DEIGHTON.—Branch store, for the Sheepridge Industrial Society, Ltd. Messrs. J. Berry & Sons, architects and surveyors:—
**Mason*—Graham & Jessop, Ltd., Huddersfield.
**Joiner*—Wood Bros., Huddersfield.
**Plumber and Electrician*—E. Bould & Son, Huddersfield.
**Plasterer*—Huddersfield Guild Society, Ltd., Huddersfield.
**Slater*—T. B. Tunnacliffe, Huddersfield.
**Concretor*—E. H. White, Brierley Wood, Huddersfield.
**Steelwork*—A. Pulman & Sons, Halifax.

DUNS.—Renewal of water mains, for the T.C. Mr. J. Coupland, surveyor:—
*W. Jackson, Edinburgh | £1,520 2 3

EDINBURGH.—Various works, for the T.C. Mr. E. J. Macrae, A.R.I.B.A., City architect:—

PAVILION AT HARRISON PARK.

Brickwork—	
*J. Gairns	£157 0
Joiner—	
*A. Kent	159 5

TRAMWAY DEPOT, SHRUNHILL: MESS ROOM.

Mason and joiner—	
*W. & J. R. Watson, Ltd.	£1,769 0 0
Plaster—	
*Lind Bros.	140 5 7
Slater—	
*W. MacLean	105 0 0
Steelwork—	
*Redpath, Brown & Co., Ltd.	109 0 0

PUBLIC WASHHOUSE, PORTOBELLO.

Painter work—	
*T. Tobertson	£248 15 0

KING'S STABLES-ROAD: GARAGE, &c.

Brick, &c., work—	
‡J. Gairns	£750 0
Joiner—	
*Bain & Brown, Ltd.	630 0
Plumber—	
*R. Blackie & Son	183 0
Slater—	
*W. McLean	130 8

(All of Edinburgh.)

GLASGOW.—New Kelvin Hall, for the Corporation:—
*J. Train & Co. | £207,000

GLASGOW.—Fittings for the Trongate portion of the new buildings, for the T.C.:—
‡W. Lightbody | £7,297 1 5

GLASGOW.—Fencing of the paddling pool at Kelvingrove Park, for the T.C.:—
‡A. & J. Main & Co., Ltd. | £120 8

GLASGOW.—Slating work at Bellefield Sanatorium, for the T.C.:—
*Wm. Walker & Sons | £1,762 15 7

GLASGOW.—Electric lighting work required for the additions at Bellefield Sanatorium, for the T.C. City Engineer and the Electrical Engineer:—
‡Haddow & Co., Glasgow | £1,214 16 4½

HAROLD COURT.—Twelve shelters at the County Sanatorium, for the Essex C.C.:—
‡F. J. French, Chelmsford | £469

HEYSHAM.—Reconstruction of the Heysham-road, from "The Battery" Hotel to Longlands-lane, for the U.D.C.:—
*R. Naylor & Son, Bradford | £26,825

HILTON.—Two hostels and buildings, for the National Committee for the training of teachers. Mr. J. A. O. Allen, F.R.I.B.A., architect, 25, Union-terrace, Aberdeen:—

Carpenter work—	
*Burnett & Low, Aberdeen	£9,415 18 2
Roof tiler work—	
*G. Farquhar, jnr., Aberdeen	775 9 0
Reinforced concrete work—	
*Clark & Chapman, Aberdeen	4,371 0 0
Plaster work—	
*J. Scott & Son, Ltd., Aberdeen	5,152 16 6
Asphalte work—	
*The Associated Asphalte Co., Ltd., Glasgow	226 9 0
Plumber work—	
*A. B. Robertson & Son, Ltd., Aberdeen	4,075 13 9
Glazier and painter work—	
*Law & Horne, Aberdeen	1,401 3 3
Electrical work—	
*A. V. Robertson & Son, Ltd., Aberdeen	1,225 13 5
Blacksmith work—	
*Shirras, Laing & Co., Aberdeen	380 5 0
Heating engineer work—	
*A. McRobb, Aberdeen	4,042 15 10

HORNSEY.—Demolition of engine foundations, &c. at generating station, for the T.C.:—
‡Demolition and Construction Co. | £412

HORNSEY.—Workshop at generating station, for the T.C.:—
‡Compton Bros. | £492

HUDDERSFIELD.—Concreting, &c., at cold stores, for the T.C.:—
‡Mark Brook & Sons, Ltd.

HUNTINGDON.—Alterations and additions to the Poor Law Institution, for the Guardians. Mr. Wm. A. Lea, L.R.I.B.A., architect, Broughton, and 4, Market-hill, Huntingdon:—

Alterations and decorating—	
*M. J. Allen & Son, Brampton, Hunts	£1,512 0 0
Heating and plumbing—	
*W. H. Warren, Huntingdon	515 18 7

KENT.—Surfacing the road between Maidstone and Ashford, on the Maidstone—Folkestone-road, for the Kent C.C.

*Chittenden & Simmons, Maidstone.. £69,608

LEEDS.—Additional sewage, storm-water and humus tanks, with sludge pumphouse, workshop and store at Rodley Sewage Works, for the T.C. :—

*F. Whitaker & Co., Ltd..... £23,978

LITTLEHAMPTON.—Museum, for the U.D.C. :—

*P. Cooper £1,598

LONDON.—Construction of a roof over water filtration plant to be installed at Hornsey-road baths, for the Islington B.C. :—

A. Cheetham	£880 0
Randall & Sons.....	750 0
J. Johnson	739 0
J. C. Mather	718 0
A. C. Mackinlay	710 10
G. S. Stevens.....	645 0
H. J. Goodman.....	643 0
‡Stevens & Sons.....	588 0

(All of London.)

LONDON.—For (1) 5,100 yds. of 24 in. main, Putney-hill to Gunter-grove; and (2) 750 yds. of 24-in. main, from Lillie-road to Fulham-road, for the M.W.B. :—

Wilson Lovatt & Sons, Ltd. ..	£35,211 0 0
William Press & Son	32,650 2 0
Thomas Muirhead & Co., Ltd.	30,607 16 6
John Mowlem & Co., Ltd.	30,605 15 0
‡Whittaker Ellis, Ltd.	28,503 5 11

LONDON.—External repairs at Buckingham Palace-road library, for the Westminster City Council :—

Holland & Sons, Ltd.....	£547 15
Army & Navy Co-operative Society, Ltd.....	507 0
W. Lilly & Co.....	450 0
Burton Bros.	412 10
‡Sims & Russell	337 0

LONDON.—Chimney-pots at "Walden House," Pimlico-road, for the Westminster City Council :—

W. Lilly & Co.....	£289 0 0
Sims & Russell.....	286 0 0
T. Coulthard & Sons.....	285 19 6
‡R. M. Pearson.....	250 0 0

(All of London.)

LONDON.—Re-wiring for electric light, forming new staff room at the South Audley-street library, for the Westminster City Council :—

W. Lilly & Co.....	£714 0
Burton Bros.	670 7
Sims & Russell	642 0
Holland & Sons, Ltd.....	634 5
‡Army & Navy Co-operative Society, Ltd.....	593 0

LONDON.—A hut, with locker accommodation, at each of the bowling greens, for the Wandsworth B.C. :—

*South Western Appliance Co..... £308

LONDON.—Fourteen flats on the Blackshaw-road housing site, for the Wandsworth B.C. :—

‡Perry Bros. £11,072

LONDON.—Tenders accepted by H.M. War Office :

Building Works and Services: Catterick Camp—supply and erection of fencing: Armstrong, Addison & Co., Sunderland. Lydd—erection of married soldiers' quarters: G. H. Bates, Lydd, Kent. Didcot, Foxhall Camp—erection of married quarters: J. E. Billings & Co., Ltd., London, S.W. Colchester—erection of cook-house at Reed Hall: W. Chambers & Son, Colchester. Aldershot—concrete roads, &c., at Smallshot: Franks, Harris Bros., Ltd., Guildford, Surrey. Derby—Regimental Institute and additions: J. H. Fryer, Derby. Hamilton Barracks—restoration of Recreation Ground: M. M. Hart, Glasgow. Royal Arsenal, Woolwich—foundations and drain: John Mowlem & Co., Ltd.,; London, S.W. Aldershot—extension to Louise Margaret Hospital: Mussell-White & Son, Basingstoke, Hants. Smallshot—new buildings and reconstruction work: Sir Lindsay Parkinson & Co., Ltd., London. York—headquarters offices—repairs to roofs: Pickles Bros., Leeds. Plymouth—married quarters, &c., at Crownhill: F. J. Stanbury, Plymouth. Catterick Camp—erection of bunkers at Power Station: G. R. Wade & Son, Richmond, Yorks.

Installations: Bovington Camp—heating ord. block: E. Deane & Beal, Ltd., London, E.C.

LONDON.—Tenders accepted by H.M. Office of Works :—

Building Works; Bilston P.O.—alterations: H. Woodward, Birmingham. Birkenhead, Roland House Telephone Exchange—alterations: Selwood, Lloyd & Co., Ltd., Birkenhead. Churchtown, Lancs., Telephone Exchange—erection: Ogden Bros., Oldham. Croydon Telephone Exchange—asphalter: London Asphalte Co., Ltd., London, E.C. Cullercoats P..O Wireless Station—carpenter, &c.: Osborne Bros., Newcastle-on-Tyne; Plumber: Wm. Scott & Sons, Newcastle-on-Tyne. Foreign Office, S.W.—Repairs, &c.: Sykes & Son, Ltd., London, W.C. G.P.O.—extension of Queen Victoria-street building: Leslie & Co., Ltd., London, W. Steelwork: A. D. Dawnay & Sons, Ltd., London, S.W. "Gerrard" Telephone Exchange—lift enclosure: G. Groves & Son, London, N. Halesworth Telephone Repeater Station—steelwork: Cocksedge & Co., Ipswich. Harrow, H.M. Stationery Office—extension: Wilson, Lovatt & Sons, Ltd., Wolverhampton; steelwork: E. C. & J. Keay, Ltd., Birmingham. Harrow, H.M. Stationery Office, road construction—demolition of stack: G. Aldington, London, S.W. Plumber: J. Belton, London, N. Hove Telephone Exchange—plasterer: J. H. Jeffrey, Brighton. Keyham, Devonport, Employment Exchange—steelwork: Blight & White, Ltd., Stonehouse, Devon. Leigh-on-Sea P.O., &c.—erection: H. Lacey & Sons, Luton. Asphalter: Engert & Rolfe, Ltd. London, E. Leigh-on-Sea Telephone Exchange—erection: Jas. C. Flaxman & Sons, Ltd., Southend. Steelwork: Redpath, Brown & Co., Ltd., London, E.C. Manchester, "City" Telephone Exchange—mason: Manchester Stone & Slate Co., Ltd., Manchester. Manchester, 76, Newton-street—plasterer: James Acton, Manchester. Middlesbrough P.O.—extension: C. F. Mundell & Co., Ltd., Middlesbrough. Peverill Point, Swanage—erection of coastguard cottages: Pond & Walton, Swanage. Preston P.O.—steelwork: T. Blackburn & Sons, Ltd., Preston. Preston, 38, Westcliffe—glazier: Williams & Watson, Ltd., Liverpool. Ironwork, &c.: T. Blackburn & Sons, Ltd., Preston. Slater: John Moxham & Sons, Preston. Rugby, H.M. Radio Station—gangways: Edwin Archer & Sons, Ltd., Northampton. St. Albans Wireless Station—asphalter: The Neuchatel Asphalte Co., Ltd., London, S.W. Shaw P.O., &c.—carpenter, &c.: Charles Schofield & Co., Ltd., Oldham. Founder and smith: T. Blackburn & Sons, Ltd., Preston; mason: S. & J. Whitehead, Oldham; plasterer: J. Glynn, Oldham; plumber, &c.: Hill & Gibson, Oldham; slater: Isaac Pogson, Shaw. Sherwood Telephone Exchange—steelwork: Sands & Son, Ltd., Colwick. Southend Telephone Exchange—erection: Jas. C. Flaxman & Sons, Ltd., Southend. Torquay Employment Exchange—alteration: R. F. Yeo & Sons, Torquay. Walsall P.O., &c.—erection: W. B. & F. T. Archer, Birmingham. Walton-on-Thames P.O.—steelwork: Redpath, Brown & Co., Ltd., London, E.C.; steps and landings: Ferro-Concrete Roof Plate Co., Ltd., Shepperton. Wandsworth Branch P.O.—artificial stonework: Beacon Stone Co., Ltd., West Thurrock; joiner: Polden & Authers, London, S.W. Weeting Hall, Norfolk, Ministry of Labour Training Centre—adaptations, &c.: William Harbrow, Ltd., London, S.E.

Engineering Services: "Langham" Telephone Exchange, W.—heating: E. Deane & Beal, Ltd., London, E.C. Leeds, Ministry of Pensions Hospital—heating: H. Braithwaite & Co., Ltd., Leeds; wiring: A. Innes, Leeds. Maida Vale Telephone Exchange—heating: G. & E. Bradley, London, E.C. Montagu House, S.W.—wiring: R. Langston-Jones & Co., Teddington.

Painting: J. Scott Fenn, London, S.E.; Rawlings Bros., Ltd., London, S.W.; F. Troy & Co., Ltd., London, N.W.

LONDON.—Enlargement of the Acre-lane home for mentally-defective boys, Brixton, for the L.C.C. :—

J. Smith & Sons (Norwood), Ltd.....	£7,986
H. L. Holloway & Son.....	7,665
J. & C. Bowyer, Ltd.....	7,378
H. Groves & Son	7,336
J. Garrett & Son	7,125
Markham & Markham.....	6,964
‡Triggs & Co.....	6,859
The architect's comparable estimate	6,945

LONDON.—Erection of Bernard House on the Holland estate, Spitalfields, for the L.C.C. :—

Griggs & Son	£43,959
Patman & Fotheringham, Ltd.	42,317
A. Roberts & Co., Ltd.	40,675
G. B. Farrar & Co.	40,385
Allen Fairhead & Sons, Ltd.	40,176
J. E. Billings & Co., Ltd.	39,990
Rowley Bros.	39,666
F. & T. Thorne	39,421
W. Lawrence & Son, Ltd.	38,786
Wilson Lovatt & Sons, Ltd., Wolverhampton	38,238
A. Monk	38,185
Chessums, Ltd.....	36,333
The architect's comparable estimate	37,439

(All of London.)

LONDON.—Superstructure of new building in Leadenhall-street and Lime-street, for the Corporation of Lloyds. Sir Edwin Cooper, F.R.I.B.A., architect, 4, Verulam-buildings, Gray's-inn, W.C. 1; Messrs. Wells, Cocking & Meston, consulting engineers, 10, New-square, W.C. 2, :—

*J. Mowlem & Co., Ltd., Westminster.

LUTON.—Additional room at public baths, Waller-street, for the T.C. Borough Engineer :—

F. Chandler & Son	£769
E. Pryer	735
J. Saunders & Son	717
P. & A. Chapman	687
The Luton Building Co.	659
L. Shepheard	635

(All of Luton.)

LUTON.—Houses, for the T.C. :—

*C. H. White—	
Block 7A (2)	£1,150
7B (2)	1,150
7C (2)	1,150
15 (4)	2,225
*P. & A. Chapman—	
Block 11A (2)	1,140
11B (2)	1,140
10 (4).....	2,280

MABLETHORPE.—Municipal buildings, in Victoria-road, for the U.D.C. :—

*F. Moore, Sutton-on-Sea £1,170

(Subject to M.H. approval.)

MANSFIELD.—Ninety houses, for the T.C. :—

*R. Moore.

MANSFIELD.—Houses on the Bull Farm estate, for the T.C. :—

*A. Mason—three pairs.
*M. D. Brown—seven pairs.
*Handby & Mann—three pairs.
*Saunt & Barton—four pairs.

(Subject to the approval of the M.H.)

MANSFIELD.—Silk factory on the Sutton-road, for Messrs. Quartex, Ltd. Messrs. A. E. & T. Sawday, architects, 56, London-road, Leicester :—

**General contractor*—H. James, jnr.
**Steelwork*—Robinson & Kershaw, Manchester.

MIDDLETON.—Enlargement of the existing drawing-room to form a Council chamber, for the T.C. :—

*R. Partington & Son..... £690

MONKTON.—New school to provide accommodation for 280 older children, with an infants' department to accommodate 144 children, for the Durham E.C. :—

‡J. Young & Co., South Shields.

MORECAMBE.—Factory, for Messrs. Souplex, Ltd., of 36, Claremont-road. Mr. H. Smith, architect :—

**Joiner*—A. Waterhouse, Morecambe.
**Plumber*—F. E. Eastwood, Morecambe.
**Heating*—Dilwood & Carr, Ltd., Preston.
**Painters*—J. H. Walton & Sons, Morecambe.

MOUNTAIN ASH.—For (*a*) 48 houses on the Pontcynon site, and (*b*) 48 on the Penrhiwceiber site, for the U.D.C. Mr. W. H. Williams, architect :—

(*A*)

*R. J. Rees & Co., Treforest, Pontypridd £22,480

(*B*)

*R. J. Rees & Co., Treforest, Pontypridd 21,840

OKEHAMPTON.—Four houses at Bondleigh, for the R.D.C. :—

W. Ash & Son, Sampford Courtenay	£1,998 10
Ellis & Son, Northtawton	1,994 0
*J. Bennett & Sons, Northtawton ..	1,850 0

OLDHAM.—Completion of St. Anne's Church at Royton, including the erection of a tower, for the vicar, the Rev. T. F. Mayes. Mr. L. T. Moore, F.R.I.B.A., architect, 3, Raymond-buildings, W.C. 1 :—

*S. & J. Whitehead, Oldham.

OSSETT.—Twenty-four houses on the Leeds-road estate, for the T.C. Mr. H. Holmes, surveyor. Quantities by the surveyor :—

**Builder*—A. E. Clegg, Gawthorpe, Ossett.
**Joiner*—J. H. Horsnell, Ossett.
**Slater*—Shevitt & Foster, Beeston, Leeds.
**Plumber*—J. Sheply, Dewsbury.
**Plasterer*—A. & F. Hodgson, Dewsbury.
**Painter*—Harry Fisher, Chickenby, Dewsbury.

PAIGNTON.—Central heating at the Public and Badminton Halls, for the U.D.C. :—

*S. Ballen £898 10

PLYMOUTH.—Structural alterations at King-street premises of Messrs. W. & R. Jacob & Co.'s (Liverpool), Ltd., new warehouse. Mr. L. F. Vanstone, architect, 15, Old Town-street :—

Elliott & Tellamy, Ltd., Plymouth	£2,234 5
Soloman & Renny, Ltd., Plymouth	2,165 0
F. L. Jillard, Plymouth.....	2,079 5

REIGATE.—Building to accommodate the filtration plant, and the foundations, for the T.C. Borough Surveyor :—

*Atkinson & Potter Bros. £297

REIGATE.—Four pairs of parlour type houses on the Reigate Lodge estate, for £4,893, and the block of three non-parlour houses in Church-road, South Park, for £1,397, for the T.C. :—

*Atkinson & Potter Bros..... £6,290

RICHMOND (SURREY).—Reinstatement after recent fire at Richmond Library, The Green, for the T.C. :—

*Jarman & Co., Richmond.

RICHMOND (SURREY).—Convenience at Richmond Cemetery, for the T.C. :—

*Jarman & Co., Richmond.

RICHMOND (SURREY).—Installation of new heating and hot-water supply apparatus at their Grove-road Institution, for the B.G. Mr. T. J. R. Kiernan, consulting engineer, 17, Victoria-street, Westminster, S.W.1 :—

*Delworth & Carr £8,923 13

ROCHDALE.—Bus garage in Mellor-street, for the C.B. :—

R. & T. Howarth, Rochdale.

ROCHESTER.—Sixty-six houses on the Maidstone-road site, for the Corporation. Mr. W. Law, City Surveyor :—

*J. H. Durrant, Rochester.

RUISLIP-NORTHWOOD.—Twenty houses, for the U.D.C. :—

Y. J. Lovell & Sons—	
Northwood	£15,432 0 0
Eastcote	10,560 0 0
J. H. James—	
Eastcote	each £595
H. Neal, Ltd.—	
Northwood	13,883 0 0
Eastcote	9,283 0 0
‡Kempster & Williams—	
Northwood	13,566 6 0
Eastcote	9,134 6 11

ST. ANNE'S-ON-SEA.—Maternity ward at the St. Anne's War Memorial Hospital, for the Board of Management. Messrs. Gunson & Son, architects, 10, Marsden-street, Manchester :—

*H. Joyce, Lytham St. Anne's.

SALFORD.—Additions to the Secondary School for Boys, Weaste-lane, Pendleton, for the Roman Catholic authorities. Mr. Ellis, architect, St. Helen's :—

*S. Megarity & Co., Manchester.

SALFORD.—Reconstruction of the "Palatine" Inn, Edward-street, for Messrs. Groves & Whitnall, Ltd. :—

*N. Brookes & Son, Patricroft.

SHEFFIELD.—New United Methodist church, lecture hall, and Sunday school, at High-grove, Ecclesfield. Mr. J. Amory Teather, architect, Mazda Buildings, Sheffield :—

*J. Fidler, Ltd., Sheffield.

SOUTH SHIELDS.—Steelwork construction of lighthouse bridge, for Coast-road Joint Committee :—

*Gustavus Bailey, Ltd. £3,326

SOUTH SHIELDS.—Concrete foundations for boiler at electricity works, for the T.C. :—

*Geo. Thornton & Co., South Shields.. £539 10

SOUTHAMPTON.—Additions to the Nurses' Home, for the Royal South Hants and Southampton Hospital Committee. Messrs. Gutteridge & Gutteridge, architects and surveyors, 9, Portland-street :—

*Bates & Son, Botley £8,588 17 6

SOWERBY BRIDGE.—Twenty-five houses on the Willow-street housing site, for the U.D.C. Mr. J. Eastwood, A.M.Inst.C.E., surveyor :—

Masons and bricklayers—
*E. & T. Bower, Halifax.

Carpenters and joiners—
*Sutcliffe & Addison, Mytholmroyd.

Slaters and plasterers—
*J. A. Berry, Sowerby Bridge.

Plumbers and glaziers—
*A. Booth, Sowerby Bridge.

Painters—
*B. Mallinson & Son, Sowerby Bridge.

Electricians—
*Oakley, Green & Wilson, Halifax.

STOCKPORT.—Additions to the Nurses' Home at Shaw Heath, for the B.G. Messrs. Peirce & Son, architects, 30, St. Petersgate :—

*Wellerman Bros., Ltd., Ryde £1,835

TORRY.—For (1) mason, brick and drainage works, &c., and (2) formation of playgrounds of new school at Torry, for the Aberdeen E.C. Mr. J. A. O. Allan, F.R.I.B.A., architect, 25, Union-terrace, Aberdeen :—

(1)*A. Birnie, Peterhead..... £11,906 4 10
(2)*J. McAdam & Son, Ltd., Aberdeen 2,072 18 1

WEST KIRBY.—Grammar school buildings at Caldy Grange, for the Cheshire C.C. Mr. H. Beswick, County Architect, Newgate-street, Chester :—

*J. Davies, Birkenhead.

WHITSTABLE.—Twelve cottages on Hambton-road, for the U.D.C. Mr. J. Dunn, surveyor :—

Norman Smith & Son, Maidstone.
Stanley Reeves, Ltd., Whitstable.
*J. B. Bartow & Co., Whitstable £4,256

WREXHAM.—152 houses, for the R.D.C. Mr. J. H Edwards, surveyor :—

Burton site, 4 houses—
*Bellis & Bowers, Wrexham £1,929 0
Rossett site, 8 houses—
*J. Johnson, Rossett..... 3,720 0
Penycae site, 10 houses—
*E. W. Gittins & Sons, Wrexham.... 4,370 0
Eyton site, 2 houses—
*S. Mitchell, Wrexham 897 10
Ruabon site, 30 houses—
*W. C. Humphreys & Son, Wrexham 13,050 0
Broughton, 10 houses—
*H. Pugh, Wrexham 4,768 0
Broughton, 10 houses—
*Summers & Stephens, Wrexham .. 4,700 0
Gwersyllt, 16 houses—
*Powell & Hughes, Wrexham 7,508 0
Gwersyllt, 34 houses—
*Griffiths Bros., Wrexham 15,232 0
Stansty, 18 houses—
*Stephen Davies, Wrexham..... 8,489 0

WORTHING.—Extension of the boy's secondary school, for the West Sussex E.C. :—

*Sandell & Sons £3,435 0

Heating—
*J. Smith & Sons..... 451 15

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